STATE OF NEW YORK

COMMUNITY DEVELOPMENT BLOCK GRANT

DISASTER RECOVERY (CDBG-DR) PROGRAM

SUBSTANTIAL AMENDMENT NO. 15

Approved by HUD June 16, 2017

Additions to: NEW YORK STATE ACTION PLAN INCORPORATING AMENDMENTS 8-14

In sections: Proposed Allocation of Funds, Updated Impact and Unmet Needs Assessment, NY Rising Housing Flood Insurance Program, Manufactured Home Community Resiliency Program, and Rebuild by Design.

Summary:

Action Plan Amendment 15 (APA 15) will address the following items:

A. *Proposed Allocation of Funds:* Table updated to reflect the reallocation of funds between programs based on unmet needs and additional funding sources.
B. *Updated Impact and Unmet Needs Assessment:* Changes made to the State's impact and unmet needs assessments, updating previous analyses provided by New York State.
C. *NY Rising Homeowner Recovery Program*: Language added to include a new eligible activity.
D. *NY Rising Housing Flood Insurance Program:* This new program will assist Low- and Moderate-Income (LMI) NY Rising applicants pay flood insurance premiums, helping ensure that rehabilitated or reconstructed properties are adequately protected from future disasters.
E. *Manufactured Home Community Resiliency Program:* Updates have been made to reflect changes to the program including identifying the eligible activities the State has determined to pursue.
F. *Rebuild by Design:* Per HUD requirements, a second Action Plan Amendment for the RBD Living Breakwaters project is being done to identify updates that have been made to the project. This amendment also identifies updates to the Living with the Bay project.
G. *One-for-one replacement:* The State is including its definition of "not suitable for rehabilitation" in its Action Plan.

Changes to programs currently in the Action Plan are indicated in red (tracked changes). New program descriptions will be identified as such and will also be in Track Changes.

A. Proposed Allocation of Funds

Description of changes: All updates associated with the proposed APA15 allocation of funds will be made to the tables at page 5 and page 50 of the State's Action Plan.

From page 5 of the New York State Action Plan:

Program	APA 14 Allocation	APA 15 Changes	Revised APA 15 Allocation
Total of All Programs	**$4,516,882,000**		**$4,516,882,000**
Housing	**$2,405,485,106**	**$270,000,000**	**$2,675,485,106**
NY Rising Homeowner Recovery Program	**$1,398,277,424**	**$250,000,000**	**$1,648,277,424**
NY Rising Condominium & Cooperative Program	**$75,000,000**	**($40,000,000)**	**$35,000,000**
Interim Mortgage Assistance Program	**$48,000,000**		**$48,000,000**
NY Rising Buyout and Acquisition Program	**$620,207,682**	**$60,000,000**	**$680,207,682**
NY Rising Rental Buildings Recovery Program	**$224,000,000**	**$10,000,000**	**$234,000,000**
Rental Properties and Affordable Rental Opportunity	*$124,000,000*		*$124,000,000*
Multi-Family Affordable Housing	*$100,000,000*	*$10,000,000*	*$110,000,000*
Public Housing Assistance Relief Program	**$10,000,000**		**$10,000,000**
Manufactured Home Community Resiliency Program	**$30,000,000**	**($10,000,000)**	**$20,000,000**
Economic Development	**$123,000,000**	**($10,000,000)**	**$113,000,000**
Small Business Grants and Loans	**$90,000,000**	**($7,400,000)**	**$82,600,000**
Business Mentoring Program	**$3,000,000**	**($2,600,000)**	**$400,000**
Tourism and Marketing	**$30,000,000**		**$30,000,000**
Community Reconstruction	**$728,432,794**	**($30,000,000)**	**$698,432,794**
NY Rising Community Reconstruction Program	**$728,432,794**	**($30,000,000)**	**$698,432,794**
Infrastructure and Match	**$854,120,000**	**($230,000,000)**	**$624,120,000**
Local Government & Critical Infrastructure Program	**$145,000,000**		**$145,000,000**
Non-federal Share Match Program	**$450,920,000**	**($213,000,000)**	**$237,920,000**
Suffolk County Coastal Resiliency and Water Quality Improvement Initiative	**$47,000,000**		**$47,000,000**
Bay Park Waste Water Treatment	**$101,000,000**		**$101,000,000**
Long Island Power Authority	**$107,500,000**	**($17,000,000)**	**$90,500,000**
Resiliency Institute for Storms and Emergencies	**$2,700,000**		**$2,700,000**
Rebuild by Design	**$185,000,000**		**$185,000,000**
Living with the Bay: Slow Streams	**$125,000,000**		**$125,000,000**
Living Breakwaters: Tottenville Pilot	**$60,000,000**		**$60,000,000**
Administration & Planning	**$220,844,100**		**$220,844,100**

B. Updated Impact and Unmet Needs Assessment

Description of changes: Changes made to the State's impact and unmet needs assessments, updating previous analyses provided by New York State.

From page 8 of the New York State Action Plan:

Updated Impact and Unmet Needs Assessment

Grantees are required by HUD to prepare an analysis of unmet needs related to disaster recovery. This Impact and Unmet Needs Assessment updates the previous analyses provided by New York State ~~in the initial Action Plan and APA6~~. The unmet needs data in this section represent the estimated gap between identified disaster recovery, rebuilding and mitigation costs and total funding already allocated through current CDBG-DR commitments and other funding sources ~~for~~ which New York State has been able to access (e.g. FEMA, insurance, NY Rising Program interventions, etc.). ~~As stated in APA6,~~ HUD's methodology shows only a partial picture of the full unmet needs of New York State. In addition to using HUD's methodology, GOSR has factored into its analysis, to the extent feasible, updated and new data sources.

The State's updated unmet needs assessment is based on HUD's CDBG-DR Allocation Methodology, as published in the October 24, 2014, Federal Register Notice FR-5696-N-11 (HUD Methodology). In addition, the State analyzed a number of different data sources relevant to each program area to identify what it determines to be the full remaining unmet need to repair and rebuild homes, businesses, and infrastructure in the most impacted communities throughout New York State (NYS Methodology). This unmet needs assessment also outlines program data to identify how the State's actions have already addressed unmet need to date through previous allocations of CDBG-DR funds.

Following HUD's methodology, it is estimated that there is approximately $~~5.68~~3.49 billion in unmet needs to repair and mitigate New York's housing, business, and infrastructure as a result of the damage from Hurricane Irene, Tropical Storm Lee, and Superstorm Sandy. If HUD's high construction cost multiplier is factored in, unmet needs are estimated at $~~6.85~~4.27 billion, an increase that reflects the likelihood that reconstruction costs will be higher in New York State than elsewhere in the United States.[i] ~~These numbers are compared to the estimate of $7.99 billion in unmet needs outlined in APA6. The State's a~~Additional analysis using the NYS methodology estimates approximately $~~16.64~~14.44 billion in outstanding housing, business, and infrastructure repair and recovery-related mitigation needs not currently funded by federal programs~~, compared to $15.74 billion in APA6~~. The State will continue to analyze and update its unmet needs as additional information is made available on damages, and/or ~~as well as~~ resources are made available for rebuilding and recovery.

~~Similar to APA6, this~~This analysis is divided into four sections: Housing, Economic Development, Infrastructure, and Rebuild by Design. Since New York City received a separate CDBG-DR allocation for their disaster recovery, the unmet needs for housing and economic development exclude the five counties of New York City.[ii] As such, summary tables and statistics included for housing and business needs exclude New York City unless stated otherwise. The analysis of infrastructure unmet needs, however, includes New York City since many of the impacted systems are of statewide concern, including public transit, roads, and water management.

This updated analysis also addresses the storms' impact on HUD-assisted properties and vulnerable populations, defined as displaced low income households, substantially damaged ~~low and moderate income~~LMI areas, and households with special needs. These groups are assessed at the Census Tract level where possible and summarized by municipality within Appendix B.

The data sources used include FEMA grants to households (FEMA-IA) and public entities (FEMA-PA); SBA loans (to households and to small businesses), assumed and estimated insurance proceeds, and other federal and State funding sources (FTA, Federal Highway Administration (FHWA), ~~and~~ U.S. Army Corps

of Engineers (USACE) storm-related projects, and the USDA Emergency Watershed Repair Program), as well as updated programmatic data. ~~Similar to APA6 and APA8, the~~The State quantifies a broader estimate of remaining unmet needs in the area of infrastructure using additional data (outlined in the Infrastructure Section. The needs estimates are effective as of ~~December 2014~~November 2016, and are subject to change as new information becomes available.

There are several differences in the unmet needs methodology for this Action Plan compared to the previous versions ~~for the initial Action Plan and APA6~~.[iii] The revised methodology, combined with the availability of new data since the ~~April 2013 and May 2014 previous versions~~previous versions~~publications~~, results in new unmet need figures. The new estimates reflect the progress of New York State and federal programs to address these previously outlined unmet needs. Table 2 presents the State's latest estimate of unmet needs as a result of Hurricane~~,~~ Irene, Tropical Storm Lee, and Superstorm Sandy.~~:~~

TABLE 2: ESTIMATE OF UNMET NEEDS FOR HURRICANE IRENE, TROPICAL STORM LEE AND SUPERSTORM SANDY IN MILLIONS (EXCLUDING NEW YORK CITY)

	APA15~~8~~		APA15~~8~~ (w/ HUD Construction Cost Multiplier)	
	Unmet Need (Based on HUD Allocation Methodology)	**Unmet Need (Based on NYS Methodology)**	**Unmet Need (Based on HUD Allocation Methodology)**	**Unmet Need (Based on NYS Methodology)**
Housing	$~~2,018~~1,294	$~~2,018~~1,294	$~~2,906~~1,863	$~~2,906~~1,863
Economic Development	$~~624~~476	$~~624~~476	$~~898~~685	$~~898~~685
Infrastructure	$~~3,041~~1,719	$~~13,994~~12,672	$~~3,041~~1,719	$~~13,994~~12,672
Total	**$~~5,683~~3,489**	**$~~16,635~~14,442**	**$~~6,845~~4,267**	**$~~17,798~~15,220**

Source*:* ~~FEMA Individual Assistance data effective December 2015, Small Business Administration Business Loan data, effective December 2014, FEMA Public Assistance data effective December 2014, Dun and Bradstreet business records for 2012, FEMA Superstorm Sandy Inundation Files, NYS Department of Financial Services Insurance Data (October, 2013), Census Data (ACS, 2007-2012 5 year average), Department of Transportation (DOT), FTA, Federal Highway Administration, and U.S. Army Corps of Engineers Sandy-related projects effective, and USDA Emergency Watershed Repair Program (December 2014).~~ GOSR Programmatic Data (November 2016). HUD high construction cost multiplier of 1.44 applied after state interventions for housing and economic development.

Using these updated data sources, the State is able to more accurately assess the damage and economic impact caused by the storms. In addition, where available, and applicable, data from ~~the~~ GOSR's budget is used to indicate how and where programs intend to address unmet need. A summary of the impact and unmet needs assessment is provided within the body of this Action Plan. Additional county and community data is available in Appendix B.

From page 10 of the New York State Action Plan:

Housing Damage and Unmet Needs

This section is broken into a number of sub-sections covering owner-occupied housing units, rental units, HUD-assisted units, and other programs.

Owner-occupied and Rental Units

Hurricane Irene, Tropical Storm Lee and Superstorm Sandy caused widespread damage to New York's housing stock along the Atlantic Coast and in the central southern portion of the State, with an estimated 80,878 owner-occupied homes and 16,943 occupied rental units impacted statewide (excluding New York City).[iv] Damage consisted of flooding from storm surge, river flooding, and heavy rains along with structural damage caused by heavy winds. The cost to repair or replace damaged homes located outside of New York City, including mitigation needs, is estimated to be $7.20 billion (Table 3). Subtracting out the

estimated FEMA grants, SBA loans, and insurance proceeds, the cost of estimated unmet need is still $3.97 billion. When funds allocated by the NY Rising Housing Programs are accounted for, an estimated $~~2.02~~1.29 billion in unmet need remains.

TABLE 3: OVERVIEW OF OWNER-OCCUPIED AND RENTAL HOUSING DAMAGE AND UNMET NEED

Damage	Unmet Repair and Mitigation Need before State Programs	Unmet Repair and Mitigation Need after State Programs
$7,198.28	$3,969.30	$~~2,017.78~~1,293.81

Source: FEMA Individual Assistance data effective December 2014; SBA homeowner assistance data effective December 2014.

From page 14 of the New York State Action Plan:

How New York State Has Addressed Unmet Needs to Date

The State's efforts to assist storm-affected homeowners have focused on operating a Housing Recovery Program to facilitate home repairs, rehabilitation, mitigation, and elevation for the owners of single-~~-~~family homes. Additional programs are available for the owners of multi-family rental properties, and for individual owners of co-ops and condos, as well as owners' associations. The NY Rising Buyout and Acquisition Program was also established for homeowners whose homes were substantially damaged or destroyed during Hurricane Irene, Tropical Storm Lee, and/or Superstorm Sandy. All programs are operated by ~~the~~ GOSR.

The ~~first two~~three allocations of federal funds to date have facilitated home repairs, rehabilitation, mitigation, and elevation for single-family homeowners. These Housing programs are intended to address those who live in areas that regularly put homes, residents, and emergency responders at high risk due to repeated flooding. As of ~~December~~ November 2016, the Homeowner Program has more than ~~16~~12,~~299~~000 active applications.

~~The State also disseminated payments through the Interim Mortgage Assistance (IMA) Program. As of December 2014, the IMA program has 861 active cases. Programs are also available for individual owners of co-ops and condos, as well as owners' associations. These programs received 100 condo/co-op association applications, 482 condo/coop unit owner applications, and 499 condo/co-op common building elements applications.The first two allocations of funding have been spent on meeting New York's immediate recovery and rebuilding needs. As of December 10, 2014 single family homeowners received more than $365.42 million to support the repairs of 9,927 applicants, 836 of which already received their final payment (totaling $36.68 million) and 9,091 of which are still in some phase of building back or preparing to build back. In total, over $1.06 billion in CDBG-DR funding has been allocated to this Program.~~

NY Rising Homeowner Recovery Program

As of November 2016, single-family homeowners in this program have been awarded more than $1.1 billion. Of the more than 12,000 active applicants, 11,858 have received some form of payment. More than $809.2 million has been disbursed to these applicants to support repairs and resilience measures. Of the active applicant pool, 4,113 have received their final payment (totaling $250.0 million) and 7,745 are still in some phase of building back or preparing to build back. To date, over $1.398 billion in CDBG-DR funding has been allocated to this Program.

The State offers a number of mitigation and resilience measures to impacted homeowners as part of their recovery.[v] The Mandatory Home Elevation requirement is for homes that are located in the 100-year floodplain and were substantially damaged in a Qualified Disaster. The State's program provides CDBG-DR funds to elevate all such housing units. The State offers other funding for certain optional items: (1) Optional home elevation; (2) Bulkhead repair or replacement; and (3) Optional mitigation measures. As of

November 2016, more than 2,100 active single family homeowners in the program were required to elevate their homes, of which about 700 were part of a complete home reconstruction. As noted in the State's Phase 2 application for the National Disaster Resiliency Competition, the State initially estimated the average cost of elevating an existing unit at approximately $130,000. However, as noted in the application, the high cost nature of construction and repair in the region drove average costs to approximately $190,000. Design costs are estimated to add an additional 10 percent to that figure. Accordingly, program data indicates that the average cost of home elevation for applicants is about $210,000. Additionally, the highly complex nature of these projects has necessitated the State to be engaged in intensive case management and project oversight. Therefore, the State is estimating that with these additional program delivery costs, the average cost of each elevation is now approximately $259,000. This means that for the approximately 1,400 required elevations that were not part of a total reconstruction, estimated cost projections have grown from about $182 million to $362 million. This is an increase of $180 million in additional unmet recovery and resiliency needs for required single family home elevations. This does not take into account required elevations that are part of a complete reconstruction of a unit.

In addition to these applicants with required elevations, the State estimates that out of a pool of more than 2,500 applicants who are currently in the State's optional home elevation program, approximately 1,100 are located in the 100-year flood plain and have damage calculations that will likely deem them as being substantially damaged, thereby making these elevations required by floodplain management requirements. As a result of the increased elevation costs highlighted above, the State estimates that the unmet need for these additional required elevations has grown from approximately $143 million to $285 million, an increase of $142 million. In total, due to cost increases in required home elevations, the State estimates that unmet need in this area has grown by $322 million.

If a homeowner is unable to self-perform their recovery and voluntarily elects to join the GOSR Construction Program then, if the case is eligible and if funding remains, GOSR may provide contractors and/or designers and supervision of the work. The GOSR Construction Program carries out four types of projects: elevations, reconstructions, minor repairs, and environmental remediation (which includes lead, asbestos, and radon).

The budget for the GOSR Construction Program is estimated at $30 million, which is within the NY Rising Homeowner Recovery Program allocation. It is anticipated that approximately 600 homes will be served by the elevation and reconstruction scope of the program. As of January 2017, over 200 homes have been served by the minor repair program, and over 400 by the environmental remediation program. There are an additional 1,000 homes that may be served by the environmental remediation program.

As a result of these factors and the resultant increase in the State's unmet recovery and resiliency needs, the State is increasing the budget of the NY Rising Homeowner Recovery Program from $1.398 billion to $1.648 billion. ~~Funding from the first two allocations is also spent on investing in the long-term resiliency and growth of the State. The State is encouraging homeowners to take part in Optional Elevation and Mitigation measures, making a substantial and unprecedented investment in its homes and coastal communities. It is projected that 1,675 single family homeowners will opt to elevate their homes. As of December 2014, 1,308 homeowners requested funds to repair their damaged bulkhead and 931 to add other mitigation measures such as the elevating of electrical systems, securing of fuel tanks, using flood resistant building materials, and installing flood vents, backflow valves and roof strapping. In addition, there are 1,955 single family homeowners who are required to elevate their homes because their properties incurred substantial damage and are located within the 100-year floodplain.~~

NY Rising Condominium and Cooperative Housing Program

This program provides assistance for owner-occupied units that are being used as places of primary residence, either by the unit owner or by renters. Condominium Associations and Co-Op Boards are also eligible to apply for storm-related damages to repair a building's common elements, such as lobbies, hallways, and mechanical systems.

On January 25, 2016, HUD Approved Action Plan Amendment 11, authorizing revised program policies for this program. The program is closed to new applicants as of July 12, 2016. Program data indicated that, as of November 2016, the program has 46 active applications (with 2-4 likely to withdraw prior to closeout). The program is likely to serve 42-44 associations and expects to spend between $35 million assisting an estimated 430 damaged units.

As a result of this updated unmet recovery and resiliency needs assessment, the State is reducing the budget of this program from $75 million to $35 million.

NY Rising Interim Mortgage Assistance Program

Since February 2014, the State has also paid homeowners through the Interim Mortgage Assistance (IMA) Program. This program covers mortgage payments while homeowners are displaced. In February 2016, HUD approved an extension to the IMA Program, thereby prolonging the cap of mortgage assistance from 20- to 36-months for eligible applicants. As of ~~December 2014~~November 2016, the IMA Program disbursed over $28.7~~9.53~~ million to ~~587~~ 1,173 applicants and anticipates assisting many more homeowners. The State anticipated that a number of homeowners currently in the NY ~~Housing Repair~~Rising Homeowner Recovery Program will be displaced by elevation and, as a result, need assistance from the IMA Program. In total, $~~49~~ 48 million has been allocated to the IMA Program.

NY Rising Buyout and Acquisition Program

The **NY Rising Buyout Program** purchases eligible storm-damaged properties in certain high-risk areas in the floodplain determined to be among the most susceptible to future disasters. Properties purchased are restricted in perpetuity – being returned to nature, and forever-serving as a protective barrier for homes in surrounding communities.

The **NY Rising Acquisition Program** purchases substantially-damaged homes within the 100- and 500-year floodplains from interested homeowners. Aiming to spur new construction in a more robust and energy-efficient manner, these parcels are then auctioned for more resilient redevelopment.

The budget for this program is currently $620 million and was last significantly updated with APA6 (approved May 2014) when the program was in its infancy. At the time there were 764 applicants in the program; 543 in Buyout and 221 in Acquisition. By the time of APA6, the program had completed 234 property purchases; 225 buyouts and 9 acquisitions.

Since then, the program has completed 1,131 purchases, comprised of 619 buyouts and 512 acquisitions (as of November 2016). As a result of this updated program information, the State has a much clearer assessment of the number of likely applicants and the costs associated with this program.

At the time of the last substantial update of the program's budget, the State was only beginning to assess the unmet needs associated with acquisitions in places such as New York City. Since then this Acquisition program has grown much larger to encompass 138 applicants in New York City and many more throughout Long Island. In addition, a total of 410 applicants have transferred from the NY Rising Homeowner Recovery Program, with potential for another 70 applicants as hardship adjudications continue.

As highlighted in the NY Rising Homeowner Recovery Program, this is a high cost region of the United States. The State continues to reassess costs associated with this program. In particular, the State has identified additional costs associated with maintenance and fully-permitted and abated demolitions of properties that it purchased. In each case, to the extent applicable, the State is required to go through a process of pre-demolition activities. These activities consist of: 1) Structural assessments; 2) Asbestos containing material (ACM) surveys; 3) water and sewer disconnects~~,~~; 4) utility disconnects; and 5) the abatement of the positive results of the ACM surveys, and State demolition and wetland permitting in order to complete the demolition of properties. At the time of the budget formation for APA6, the State had completed only 234 property purchases and 38 demolitions. As of November 2016, the State has demolished 290 properties. As a result, it has a much deeper understanding of costs associated with

maintenance and demolition of these properties. The State is therefore identifying $60 million in additional unmet recovery needs. ~~As of December, 2014 there are 1,493 active cases in the Buyout and Acquisition Program. Over 800 offers have been made, with almost 500 closings completed. In total, over $621 million has been allocated for this Program. Table 10 summarizes the total CDBG-DR proposed allocation for Homeowner Programs.~~

TABLE 10: TOTAL CDBG-DR PROPOSED ALLOCATION OF FUNDS BY NEW YORK STATE IN MILLIONS (EXCLUDING NEW YORK CITY) – HOMEOWNER PROGRAMS

Program	Total Proposed Allocation of Funds
NY Rising Homeowner Recovery Program	$1,648.28
NY Rising Condominium and Coop Housing Program	$35.00
Interim Mortgage Assistance Program	$48.00
NY Rising Buyout & Acquisition Program	$680.21
Total	**$2,411.49**

Source: GOSR Programmatic Data and effective ~~December~~ November 2015~~5~~6

~~*From page 16 of the New York State Action Plan:*~~

How ~~the~~ New York State Has Addressed Unmet Needs to Date

The NY Rising Rental Buildings Recovery Program consists of the NY Rising Rental Properties Program (RP) and Affordable Rental Opportunity (ARO), the Multi-Family/Affordable Housing Program which includes the Affordable Housing Fund and the Small Project Affordable Rental Construction (SPARC) Program. The aforementioned programs with the Public Housing Assistance Repair Program (PHARP), and the Manufactured Home Community Resilience Program (MHCRP) are aimed at repairing or improving damaged properties and provide essential and affordable housing resources to New Yorkers in need. The vast majority of these funds are aimed at LMI New Yorkers. In total, the State is proposing to allocate $264 million to these programs (Table 13). ~~The Rental Properties Program repairs damaged properties and provide essential and affordable housing resources to New Yorkers in need. As of December 2014, the Rental Properties Program has 908 active cases and has disbursed $474,430 to 19 property owners. In total, the State has allocated $225 million to this program (Table 13).~~

~~TABLE 13: TOTAL CDBG-DR PROPOSED ALLOCATION OF FUNDS BY NEW YORK STATE IN MILLIONS (EXCLUDING NEW YORK CITY) – RENTAL PROGRAM~~

~~Program~~	~~Total Proposed Allocation of Funds~~
~~NY Rising Rental Properties Recovery Program~~	~~$225.00~~

~~**Source**: Governor's Office of Storm Recovery Internal Program data (December 8th, 2014).~~

TABLE 13: TOTAL CDBG-DR PROPOSED ALLOCATION OF FUNDS BY NEW YORK STATE IN MILLIONS (EXCLUDING NEW YORK CITY)– RENTAL PROGRAM

Program	Total Proposed Allocation of Funds
NY Rising Rental Buildings Recovery Program	$234.00

NY Rental Properties Program/Affordable Rental Opportunity	$124.00
Multi-Family/Affordable Housing Program	$110.00
Affordable Housing Fund	*$80.00*
Small Projects Affordable Rental Construction Program	*$30.00*
Public Housing Assistance Repair Program	$10.00
Manufactured Home Community Resilience Program	$20.00
TOTAL	264.00

Source: Governor's Office of Storm Recovery Internal Program data (November 2016).[vii]

Repairing Existing Rental Properties

The NY Rising Rental Properties Program

The NY Rising Rental Properties (RP) Program provides awards to eligible rental property owners for prospective and retrospective residential rehabilitation, reconstruction, and/or improvements to make the property more resilient to the impact of future storm events. The RP Program may provide additional funding to comply with the terms of National Environmental Protection Act. The Program provides awards to eligible rental properties of any size with the exception of two family owner-occupied properties. Owner-occupied two-family homes are served in the NY Rising Homeowner Recovery Program. As of November 2016, the program has approximately 712 applicants and is closed to new applicants.

The NY Rising Affordable Rental Opportunity Program

ARO provides the funding for the activities covered in the RP Program, as well as financial incentives to make a rental unit affordable to an LMI tenant and to account for the owner's cost of compliance with post-closeout requirements. ARO will offer assistance to cover the cost between the lesser of the HUD High HOME rent limit, or the previous rental rate and a rent affordable to a tenant. Affordability is calculated to be a rent rate of no more than 30% of 80% of area median income. The Program will also provide assistance of 10% of the rent difference to cover the cost of compliance for the Program. The program opened to new applicants on August 1, 2016.

Unmet Recovery Needs

Similar to the NY Rising Homeowner Recovery Program, the State has faced increased costs related to elevations for rental properties in both the RP and ARO programs. The State's latest estimates for elevations are approximately $46 million for projected applicants. As a result, the State is identifying additional Unmet Recovery Needs associated with these programs.

Constructing New Rental Properties in Storm-Impacted Areas

Multi-Family/Affordable Housing Program

The Multi-Family/Affordable Housing Program supports substantial rehabilitation and new construction of larger affordable rental housing projects. The program seeks to leverage other public and private sources of affordable housing financing, including tax-exempt bonds, conventional private debt, federal and State Low-Income Housing Tax Credits, Historic Tax Credits, State housing capital funds, and other sources. As highlighted in the State's NDRC application, the State issued requests for proposals (RFPs) jointly with the Housing Finance Agency and Housing Trust Fund Corporation to identify shovel-ready projects in storm-impacted areas. Approximately $80 million in CDBG-DR funding was made available for the Affordable Housing Fund, including administrative costs. GOSR ultimately awarded $79.22 million to eligible projects. The State received applications for over $101 million in funding.

Small Project Affordable Rental Construction program

The State sought proposals from certified Community Development Finance Institutions qualified to develop and administer SPARC in spring 2015. The project anticipates making multiple awards to developers across New York State to build affordable rental projects of no less than 8 units and no more than 20 units. Small Projects will be located in areas where housing stock was damaged or lost due to the impact of Superstorm Sandy, Hurricane Irene, and/or Tropical Storm Lee. This is included in the budget allocation for Multi-Family Affordable Housing.

Unmet Recovery Needs

As a result of the RFP processes the Housing Finance Agency and Housing Trust Fund Corporation received additional interest in the program. As a result, the State is identifying these additional $20 million in proposals as Unmet Recovery Needs and will, as a result, increase its funding for the Multi-Family Affordable Housing Program by $10 million.

HUD-Assisted Properties

Introduction

The Unmet Needs Assessment within the State's initial Action Plan noted that HUD had initially identified two Public Housing Authorities (PHAs) on Long Island: The Long Beach and Freeport Housing Authorities. The State then initiated significant outreach mechanisms, including surveys and multiple meetings with other PHAs, to identify additional needs; these were outlined in APA6 and APA8. That process continued through the State's phase 1 and phase 2 applications to HUD's National Disaster Resilience Competition (NDR) and the State was subsequently awarded $35.8 million in funding for resilience measures at four separate PHAs covering five sites: three in Long Island (Freeport, Hempstead, Long Beach), and one in Broome County (Binghamton Housing Authority). ~~That process found that Hempstead Housing Authority also had suffered significant damage. New York State has consulted and is continuing to consult with each of the three housing authorities to determine the extent of their unmet needs. As the PHAs move forward with their recovery, the State will move into a coordinating role between the PHAs and their federal partners. Leading this coordination will allow the State to work hand in hand with the PHAs and ensure that they are on the path to full recovery. In addition, as the State continues to assess needs throughout the recovery process, the State will continue to meet with additional PHAs as needs arise and are identified.~~

The National Disaster Resilience Competition

The State was awarded $35.8 million for Public Housing Resiliency Pilot Program through the NDR competition. This program aims to reduce the impacts of coastal and riverine flooding by targeting climate-impacted PHAs in Nassau and Broome Counties. The State will provide funding to four PHAs for site-specific physical resilience recommendations based on new resilient guidelines provided by Enterprise Community Partners as well as the social and economic resilience of their residents. The State also made a commitment to provide workforce development opportunities for residents at three storm-impacted PHAs located in Nassau County.

Public Housing Assistance Relief Program

Together with the NDR activities, the State is administering PHARP as a collection of activities with CDBG-DR funds. Through PHARP, the State is aiming to address the unmet recovery and resilience needs of PHAs outside of the City of New York with storm-damaged properties. Public housing presents a unique set of recovery needs. Public housing is typically older housing stock that suffers from deferred maintenance, obsolete physical plant, poor energy efficiency, and critical systems vulnerable to flooding. Damaged developments range in size, including low-rise, attached structures and larger 6-10 story buildings. PHA community centers, technology centers, and ancillary buildings are often vulnerable to

flooding and power loss. Mechanical equipment housed below ground in basement areas can be especially vulnerable.

The State previously committed $10 million to assist these authorities through PHARP, which will be augmented with grants to cover the local match for FEMA Public Assistance (PA) awards and investments made through the Community Reconstruction Program. GOSR will use CDBG-DR funds to provide supplemental funding, technical assistance and expertise to enhance the recovery efforts of the Freeport, Hempstead, Long Beach, and Binghamton Housing Authorities. GOSR has worked with these PHAs to craft specific strategies to invest in extensive resiliency measures to protect these properties and the vulnerable LMI populations they house.

Freeport Housing Authority: The Freeport Housing Authority manages 351 apartment units at five locations within the village limits of Freeport. Of these complexes, the Moxie Rigby location, consisting of 100 units of family housing, was impacted by Hurricane Irene and Superstorm Sandy. Floodwaters inundated seven buildings, causing damage to mechanical, electrical and specialty systems. High winds blew down trees ~~down due to~~ and power surges caused strain on the water circulation systems, burning out pumps. Both storm events significantly damaged basement systems which subsequently had to be replaced twice in two years.

Freeport Housing Authority successfully negotiated with FEMA on their recovery and mitigations needs. They were then able to leverage that negotiation with HUD to make the case for a new construction project to house the residents at Moxey Rigby Apartments. Freeport Housing Authority was identified by HUD as having a high concentration of LMI households with major to sever damage. The state committed up to $9 million in CDBG-DR funds for eligible new construction for the authority's Moxey Rigby site. The Authority partnered with affordable housing developer, Georgica Green Ventures LLC to construct 100 new residential units available to current PHA residents at Moxey Rigby. The project will be a one to one replacement for its current units. The project is designed to incorporate new and innovative flood mitigation measures and green building design. The project is funded using CDBG-DR and NDR financing along with contributions by FEMA, equity from the sale of federal housing tax credits, tax exempt bonds, Homes for Working People and pledged Developer fees. ~~Freeport Housing Authority is currently in negotiations with FEMA on their recovery and mitigations needs. It is also assessing their long term goals as a housing authority and what recovery path is best to meet these goals.~~ The State is committed to continue to work with Freeport Housing Authority to secure the best recovery pathway ~~of recovery~~.

***Long Beach Housing Authority*:** The Long Beach Housing Authority operates 374 subsidized low-rent units within five development sites. The overall occupancy rate is 100%.

Channel Park Homes, a family development, experienced the greatest damage, including flooding on the first floor of homes and community facilities. The damage required mold remediation, replacement of floors and drywall, painting, replacement of appliances and kitchen cabinets, and repair or replacement of Heating, ventilation and air conditioning (HVAC) ~~HVAC~~ systems. Additionally, brick façade walls on three of the residential buildings collapsed or were severely compromised.

Four senior high-rise buildings were also damaged by high winds and flooding within basements and communal areas. The damage required repairs to floors and walls, equipment, and HVAC systems. While homes were minimally impacted, damage to elevators, electrical systems and heating units emphasized the need to relocate emergency generators and heating and cooling systems. ~~As of December 2014, no storm mitigation or other resiliency improvements had been completed.~~

Repairs are currently ongoing at the Channel Park Homes using FEMA funds. The Housing Authority received funding from FEMA's HMGP Program for mitigation efforts along with funding from Community Development Corporation, Long Island from its weatherization program to address roofs, doors and windows. In addition, the Long Beach Housing Authority will receive CDBG-NDR funding to pilot

approaches and strategies for the overall flood proofing and enhanced levels of protection, adaptation, redundancy and community at the facility~~Long Beach Housing Authority is also still in discussions with FEMA regarding the scope of their recovery needs. As mentioned, the State will take the lead to coordinate all efforts between the Housing Authorities and FEMA, clearing the pathway towards a clear recovery strategy~~.

Town of Hempstead Housing Authority: The Town of Hempstead Housing Authority operates 14 housing sites within Nassau County, five of which are located within the 100-year flood plain and were evacuated before the storm made landfall. All 14 sites sustained some level of damage, with three sites receiving significant damage.

Inwood Gardens and Mill River Gardens were damaged by flooding and high winds. Residential units and community spaces were inundated with saltwater. Repairs consisted of mold remediation, asbestos abatement, and replacement of electrical systems, boilers, sheetrock, appliances, cabinets, and fixtures, ~~and~~ plus insulation. The asbestos abatement work required relocation of existing residents. Green Acres suffered significant roof damage, requiring structural repair and the relocation of one resident.

Two public housing facilities operated by the Town of Hempstead Housing Authority will receive funding to implement comprehensive resiliency upgrades. The proposed measures are to provide a new administrative/community center and to harden an existing community center, replace existing bulkhead with new bulkhead with landscape features for bank protection, elevate mechanical systems, and replace and elevate standby generators.~~All repairs have been made to date, using a combination of the Town of Hempstead Housing Authority's own funds, insurance proceeds and FEMA funds. The Housing Authority has three applications to FEMA's HMGP Program for mitigation efforts including mold remediation, electrical rewiring, and HVAC elevation. In addition, it has applications for building rehab, asbestos removal, and emergency protective measures from the FEMA PA program. The State will continue to work closely with FEMA and the Housing Authority to ensure all of the proper steps are taken to ensure recovery.~~

Binghamton Housing Authority: The Binghamton Housing Authority operates several housing sites within Binghamton, Broome County. In September 2011, Tropical Storm Lee completely flooded the basements of three housing/shelter properties and destroyed the mechanical systems that provided services to 425 rental units and more than 450 residents, many of whom were special need populations. The properties are uninhabitable for 2 months or more resulting in the highest density and longest displacement of any population in Broome County.

The North Shore Towers is comprised of 224 units which are distributed between 2-10 story buildings. The project design is underway with the State through the Dormitory Authority of the State of New York. Site Assessments are underway to identify additional resiliency initiatives while identifying additional unmet needs. The City of Binghamton submitted an application for a FEMA HMGP grant, but it was rejected. Mitigation measures remain a priority for the Housing Authority site and are currently being explored.

Other PHA's with Identified Unmet Recovery and Resiliency Needs: In addition to the abovementioned PHAs that are receiving funds from the NDR Competition, the State has identified a number of other PHAs that were damaged in one or more of the covered storms, as evidenced by having an active project worksheet in the FEMA PA database showing eligible costs. GOSR is conducting outreach to these PHAs with FEMA PA claims and also exploring opportunities to link public housing (Rockville Center Housing Authority, Town of Islip Housing Authority) with the Mill River RBD project and nearby Community Reconstruction Projects (Town of Islip). In addition to the direct financial assistance, GOSR assists housing authorities in securing resources from FEMA PA and private insurance.

The table below provides the latest assessment of FEMA PA eligible damages, as evidenced by damage and mitigation estimates. These totals reflect damage to all PHA's in New York State (excluding New York City) with FEMA-eligible damages and mitigation.

~~Damage assessments are outlined in Table 14.~~

TABLE 14: DAMAGE ASSESSMENT FOR PUBLIC HOUSING AUTHORITIES

-	Repairs	Mitigation	Total
Freeport PHA	$267,000	still assessing needs	$549,000
Long Beach PHA	$5,000,000	still assessing needs	$5,000,000
Town of Hempstead PHA	$6,000,000	still assessing needs	$6,000,000

Source: Long Beach numbers are based on self-reported estimates derived from surveys and contacts with the PHA. Hempstead PHA numbers are derived from self-reported estimates and from applications for funds to FEMA PA and HMGP. Freeport PHA numbers include $267,000 from FEMA PA applications. However, Freeport PHA also reports additional unmet needs that are still being assessed by the State. All numbers are current as of December, 2014.

TABLE 14: DAMAGE ASSESSMENT FOR PUBLIC HOUSING AUTHORITIES

-	Repairs and Eligible Mitigation ($)	Federal Share Approved ($)	Estimated Local Match ($)
Binghamton Housing Authority	2,664,497	1,998,373	666,124
Ellenville (Village of) Housing Authority	67,761	50,821	16,940
Freeport Public Housing Authority	5,982,509	5,384,258	598,251
Herkimer Housing Authority	290,308	217,731	72,577
Ilion Housing Authority	680,460	510,345	170,115
Kaser (Village of) Housing Authority	11,000	8,250	2,750
Long Beach Housing Authority	7,986,509	7,185,428	801,081
Plattsburgh Housing Authority	9,232	6,924	2,308
Poughkeepsie Housing Authority	218,199	163,649	54,550
Schenectady Municipal Housing Authority	54,149	40,612	13,537
Town of Hempstead Housing Authority	2,488,160	2,137,194	350,967
White Plains Housing Authority	6,493	5,844	649

Source: FEMA PA EMMIE Database as of November, 2016.

Below is a brief summary of damages and mitigation measures at the eight identified PHA's beyond those in the NDR process:

Village of Ellenville Housing Authority: Village of Ellenville Housing Authority complex was inundated by floodwaters, damaging the flooring, sheetrock walls, bathroom and kitchen plumbing, fixtures and appliances, apartment heat pumps and HVAC systems, a trash compactor, and a riding lawn mower. Village of Ellenville Housing Authority restored the apartment complex to its pre-disaster condition using force account labor and materials, and contract services conducting the following: removing and replacing damaged building contents and interior structural contents, and rewiring electrical equipment. The flood waters at the Ellenville Housing building caused damage to the lower floor during the disaster period. In order to prevent future damages from a similar event, the applicant proposes the following mitigation measures: 1) Prepare and seal the lower 4 feet of building; 2) Elevate all vents exiting the building below 4 feet above ground; 3) Place sewer back flow on incoming line; and 4) Install all door dam brackets.

Herkimer Housing Authority:

Eligible costs include emergency protective measures and debris removal, repair and remediation of damage to buildings (kitchen, common areas, laundry, office, etc.), replacement of building contents including HVAC system (plus elevation/mitigation), and parking lot repair. The applicant also has a hazard mitigation proposal to relocate equipment and install watertight panels.

Illion Housing Authority: Eligible costs include emergency protective measures and building repairs due to severe flooding. First floor demolished down to concrete slabs, steel columns, beams, and masonry walls. Costs also include asbestos abatement. Mitigation was requested in the form of wet proofing the Packaged Terminal Air Conditioner Units.

Village of Kaser Housing Authority: The Community Senior Center building which is owned by the Village of Kaser Housing Authority and was inundated due to overbank flooding of the adjacent Pascack

Brook. Damage incurred by flood waters, which reached a height of 3-4 feet, included partition walls; base, case, and chair rail molding; cabinets; flooring; and electrical.

Plattsburgh Housing Authority: Eligible costs include debris removal, minor repairs to building exteriors (wind damage), repairs/replacement of flooring (flood damage), purchase/rental of dehumidifiers and drying units.

Poughkeepsie Housing Authority: Eligible costs include emergency protective measures and temporary heat, remediation and repair of damaged buildings, replacement of building contents, including damaged boilers and water heaters.

Schenectady Municipal Housing Authority: Eligible costs include debris removal and emergency protective measures, repair and remediation due to sewage back-up, and replacement of damaged equipment. In addition, a hazard mitigation proposal has been submitted to prevent potential future flooding. The proposal is to construct a backflow prevention valve on the sewer line outside of the building that would stop sewage backup into the basement of the apartments. As of November 2016, this proposal is not currently approved as part of the obligation. The applicant is applying for assistance for the project from FEMA under Section 406 of the Stafford Act.

White Plains Housing Authority: Primarily work was focused on debris removal.

Other Identified Needs in the State's Public Housing Authorities: In addition to the above, through the NY Rising Community Reconstruction Program, unmet recovery needs were identified for public housing assets related to the Town of Islip Housing Authority (TOIHA). Specifically, this PHA is requesting CDBG-DR funding to install a series of "green infrastructure" drainage improvements at the Penataquit Village facility, a public housing site in Bay Shore operated by the TOIHA with existing LMI multi-family residential housing.

GOSR is working with TOIHA and plans to expend CDBG-DR on the following activities:

- **Oakdale Resiliency Generator (Ockers) (**Project budget of approximately $1,180,000): Funding to design and implement storm resiliency improvements at TOIHA's Ockers Gardens public housing site in the Hamlet of Oakdale, NY. The project will provide reliable backup power for the TOIHA residents at the Ockers Gardens public housing site, 965 Montauk Highway, Oakdale, NY 11769.
- **Penataquit Creek Resiliency Improvements (**Project budget of approximately $440,000): Funding to design and implement storm resiliency improvements at the TOIHA's project related to Penataquit Creek.

For the multifamily assisted housing stock, the ~~State of~~ New York State Office of Homes and Community Renewal surveyed properties in its assisted housing portfolio to identify damage and uncovered losses. The State found high levels of insurance coverage. It determined that immediate needs had been met, and referred owners to FEMA where appropriate. HCR helped coordinate between owners and tenants to identify replacement housing. The State continues to assess the resiliency needs of these properties. If needs are identified, they can be addressed through the Rental Properties Program or the Multi-family/Affordable Housing Program. The State also sought input on the recovery needs of affordable housing developers at an industry roundtable held during the development of the Multi-Family/Affordable Housing Program.

From page 22, paragraph 7, of the New York State Action Plan:

Summary of Housing Unmet Needs

With an estimated $50 billion in damages, Hurricane Irene, Tropical Storm Lee, and Superstorm Sandy are, collectively, the second costliest storm in American history.[viii] Over 90,000 occupied housing units were damaged outside of New York City, including 80,878 owner-occupied units and 16,943 renter occupied units~~s~~. The majority of these units, approximately 70%, sustained major to severe damage.

Housing unmet needs is reflective of the estimated cost of damage and estimated mitigation needs for occupied units, minus funding received or anticipated from FEMA, SBA, and private insurance to repair damage. Unlike APA6, the State also included detailed programmatic data to indicate how the unmet need has changed as a result of its CDBG-DR allocations. The remaining estimated unmet need for housing is approximately $~~2.02~~1.29 billion (Table 18).

TABLE 18: REMAINING HOUSING UNMET NEEDS FOR HURRICANE IRENE, TROPICAL STORM LEE, AND SUPERSTORM SANDY (EXCLUDING NEW YORK CITY) (IN MILLIONS)

Tenure	Repair	Mitigation	Total
Renter	$389.76	$305.51	**$695.27**
Owner	$2,124.12	$1,149.90	**$3,274.03**
Identified Unmet Need	$2,513.89	$1,455.41	**$3,969.30**
Less New York ~~State~~ Rising Program Allocations:	-		**$~~1,951.52~~2,675.49**
Remaining Unmet Need	-		**$~~2,017.78~~1,293.81**

Source: Sources outlined above and internal program data. ~~; New York Rising Program Allocations does not include funds allocated Public Housing Assistance Relief Program (PHARP)~~

From page 34, paragraph 2 (Small Business Recovery Program section) of the New York State Action Plan:

In total, the State is proposing to use $~~123~~ 113 million of allocated CDBG-DR funds for economic development, a decrease of $10 million from APA14. The Small Business Recovery Program now accounts for $82,600,000 of ~~this~~the total, and ~~.~~ ~~T~~the remaining funds are for the Business Mentoring Program and for Tourism and Marketing.

Based on latest program data, ~~I~~it is expected that the $82,600,000 remaining for the Small Business Recovery Program will be sufficient to provide awards to eligible applicants but as applicants move through the program the State will continue to assess the need. After CDBG-DR allocations, the remaining unmet need in Small Business is estimated at $~~466~~476.5 million (Table 23).

TABLE 23: UNMET BUSINESS NEEDS (IN MILLIONS)

Damaged Businesses	Total Damage	Minus SBA Loans Received	Adjusted Unmet Need-Repair	Mitigation Costs	Unmet Business Needs
Damaged Businesses (HUD Methodology)	$ 610.2	$ 190.6	$ 711.3	$ 114.8	$ 826.1
+ Estimated Loss in Profits in Flood Zones					$14.2
Less Insurance Payouts for Business Interruptions, Commercial Property and Commercial Auto Damage					$250.8
Less New York ~~State~~ Rising Program Allocation					$11~~2~~3.0
Remaining Unmet Need					**$47~~6~~6.5**

Source: U.S. SBA commercial loan applications, effective December 2014, Program Data, US Census Data, FEMA Inundation Maps.

From page 36 of the New York State Action Plan:

Infrastructure Damage and Unmet Needs

~~As stated in APA6, t~~The State's infrastructure unmet needs are significantly higher than the unmet needs assessment~~,~~ defined by the HUD allocation methodology. HUD's calculation of unmet needs only accounts for projects already identified and budgeted for from the FEMA ~~Public Assistance (FEMA~~ PA~~)~~ Program and other federal Sandy-related match programs. Moreover, the number of infrastructure projects will continually increase as more physical needs assessments are completed. The State continues to develop projects that address storm recovery-related mitigation unmet needs, increasing resiliency in storm-impacted areas. The State also continues to assess large-scale infrastructure and recovery related mitigation project costs. These projects may not yet have an identified financial resource to address them.

Using the HUD allocation methodology, infrastructure unmet need is estimated at $~~3.04~~1.72 billion ~~(compared to $3.76 billion in APA6)~~. However, the State has also updated its estimate of true unmet need, and through various new data sources, estimates a new figure of $~~13.99~~ 12.67 billion. ~~This estimate has increased since APA6's estimate of approximately $11.5 billion. This number is estimated to rise as new infrastructure unmet needs are identified and outreach, repair, reconstruction, and resilience efforts continue.~~ The State's expanded methodology is outlined below.

From page 38, paragraph 4, of the New York State Action Plan:

Three areas of critical infrastructure bore the greatest impact from Hurricane Irene, Tropical Storm Lee, and Superstorm Sandy: public transportation facilities, energy systems, and wastewater management.

As of the end of State Fiscal Year 2016, the State has reimbursed $105.46 million in local match payments for FEMA PA to municipalities and other entities impacted by eligible storms. As of November 2016, the State plans to reimburse local match payments for projects that are documented to meet the LMI national objective in addition to commitments identified in agreements.

From page 40 of the New York State Action Plan:

Energy Systems

Superstorm Sandy caused widespread damage to the publicly operated utility systems and revealed the vulnerability of the electric grid. Electricity is a necessary and critical component of community recovery, the State as a result decided to assist eligible public utilities address repair, recovery and resilience projects that are needed to restore power to storm impacted areas and are eligible to receive FEMA funds. This includes the Long Island Power Authority (LIPA) which provides power to at least 800,000 households on Long Island. LIPA provides electric service to more than 1.1 million customers in Nassau and Suffolk counties and the Rockaway Peninsula in Queens. Superstorm Sandy left tens of thousands of those customers without power for weeks and followed on the heels of Hurricane Irene which left similar power outages. All 12 of LIPA's substations on the South Shore of Long Island sustained some degree of flood damage following Sandy.

After Superstorm Sandy, LIPA, a public authority, began working with FEMA to address the substantial restoration and resilience efforts (e.g. storm hardening measures, including installation of flood prevention barriers, elevation of equipment and adjustments to switching systems etc.) that would be needed to restore the grid and make the system less vulnerable to future events. The State, through GOSR, ~~will~~ has provided

~~80~~ $90.5 million to assist LIPA address matching requirements for restoration related costs. These will be applied to both the Hurricane Irene and Superstorm Sandy $1.4 billion Public Assistance awards. The match provided will be used to address post storm restoration activities to repair substations and electronic distribution systems. Although there are additional unmet needs associated with LIPA, the State does not intend to make any further match payments associated with this entity. Therefore, the LIPA budget has been reduced by $17 million and reallocated to address~~ing~~ other unmet needs.

~~The State does not currently recognize any additional unmet energy systems but GOSR's allocation of $80 million in APA8 did not cover the full need to cover the FEMA PA match amount for Superstorm Sandy. The allocation increase of $27.5 million does not meet the full FEMA PA match obligation but does that cost to not be passed onto customers.~~

From page 42 of the New York State Action Plan:

Infrastructure Unmet Needs Summary

HUD's methodology for unmet need calculation restricts these needs to federally-funded projects already accounted for through FEMA, USACE, FTA, FHWA, and USDA. The methodology also only counts local match requirements from USACE, FTA and FHWA as gap. Using this calculation, the unmet needs for infrastructure is $~~3.04~~1.72 billion after budgeted State interventions~~, a reduction of approximately $750 million as compared to APA6~~. However, the State believes that this does not account for the full gap. State agencies have reported repair to damaged transportation systems, energy infrastructure, water treatment facilities, community buildings, and other critical repairs beyond what is accounted in the HUD allocation methodology. It also does not take full account of the hazard mitigation projects related to damaged infrastructure needed to protect recovery-related investments against future hazards. Based on information collected from State agencies, the State's estimate of unmet needs includes an additional $11 ~~.41 billion~~billion of recovery-related infrastructure projects. ~~This is an additional $3.6 billion over what was estimated in APA6 because the State has continued to assess the repair and resiliency costs of recovery-related infrastructure projects.~~ Therefore, the State estimates that the full unmet need for infrastructure exceeds $~~13.99~~12 billion based on current information.

As of APA15, the State is budgeting $1.32 billion to address the unmet needs in infrastructure and match programs. This represents a reduction of $230 million since APA14. The State is focusing its efforts on reallocating these funds toward programs and projects that meet the LMI national objective.

From page 43 of the New York State Action Plan:

Rebuild By Design Unmet Needs

As noted in the October 16, 2014, Federal Register Notice, HUD allocated a portion of the funds for each awarded RBD P~~p~~roject – Living Breakwaters: Tottenville Pilot and Living with the Bay: Slow Streams. The Notice requires grantees to identify any potential gap or shortfall in the RBD funding and provide a strategy and description of funds anticipated to be generated or secured in leveraging the CDBG-DR allocation for RBD ~~p~~project completion as well as any additional CDBG-DR funds the grantee anticipates dedicating to the RBD ~~p~~project. Based on the estimated budgets provided in the RBD plans, the State identified a total preliminary funding gap of $52.36 million for the ~~Slow Streams~~Living with the Bay ~~p~~project in Nassau County and $13.1 million for the ~~Tottenville Pilot~~Living Breakwaters p~~P~~roject ~~i~~on Staten Island. The State is currently undergoing a two pronged approach to review and fill these gaps.

First, the State is analyzing the budgets provided by the RBD teams and calculating any additional planning and program delivery required to fully execute the projects and meet the requirements set out by HUD. The planning and scoping through the environmental review process will help shape the needs of the project not

outlined in the current plan. ~~The State understands that the gap could range from $66.0 million to $104.0 million. The State includes the $58.966 million dollar gap in its broader estimate of remaining infrastructure needs (Table 28).~~

Once a firm cost for the project is clear, the State will begin to execute the strategy outlined in this APA to leverage funds to fill the gap left in the budget. As the State moves through the leveraging process, the State will reassess each project as needed to identify areas where funding is secured and where funding gaps still remain. The State will work together with stakeholders and federal partners to ensure the strategies in place lead successful implementation of the projects.

Having passed the 30% design phase, the Living Breakwaters ~~p~~project's total budget is now estimated to cost $~~66~~75.5 million, resulting in a funding gap of $~~6~~15.5 million. As a result, the State includes a $~~58~~67.9 million dollar gap in its broader estimate of remaining infrastructure needs (Table 28).

Table 28: Unmet Needs for the State's ~~2~~ RBD Projects

RBD Project	Total ~~Budget from RBD Plan~~Proposed Project Cost	October 16th 2014 Allocation	Unmet Need
Living with the Bay	$177.4	$125.0	$52.4
Living Breakwaters	$~~736~~675.5~~9~~	$60.0	$~~136~~15.~~9~~5
Total	**$2~~51~~43~~52~~.~~3~~9**	**$185.0**	**$67.9~~58~~66.~~39~~**

Source: Programmatic Data

From page 44 of the New York State Action Plan:

Impact and Unmet Needs Conclusion

Hurricane Irene, Tropical Storm Lee, and Superstorm Sandy caused unprecedented damage to New York State, exposing the risks coastal and river communities face ~~in~~ from future storm events. The Table below presents New York State's estimated unmet need as outlined in APA6 and the updated estimated unmet needs as outlined in this APA. Discounting the HUD construction cost multiplier, estimated unmet needs decreased (using HUD allocation methodology) from $7.86 billion to $5.68 billion. If the high construction cost multiplier is factored in, unmet needs are estimated at $6.85 billion, an increase that reflects the likelihood that reconstruction costs will be higher in New York State than elsewhere in the country. However, these figures do not account for infrastructure needs not currently funded by federal programs; this figure is likely to continue to rise as the State identifies more needs and as more communities assess their needed resiliency projects. For example, Round I of the NYRCR Program Planning Committees developed over $883 million in priority projects ("Proposed Projects") proposed for CDBG-DR funding. CDBG-DR funding has only been identified for $557 million, leaving a gap of over $320 million, a figure included in the State's broader assessment of infrastructure unmet needs. In addition to the priority projects proposed, NYRCR Planning Committees selected 275 additional unfunded projects ("Featured Projects"), estimated to cost roughly $1.6 billion. As of now, no funding sources have been identified for these projects.

Based on the State's updated assessment of its unmet needs, there exists $~~17.80~~15.22 billion of unmet need, assuming the HUD construction cost multiplier is applied to housing and small business. As noted above, ~~M~~many ~~of these additional~~ infrastructure projects may not be eligible for CDBG-DR funding, but have been identified nonetheless by State agencies as an unmet recovery-related need. The State continues to assess these unmet needs for CDBG–DR eligibility. ~~Therefore, unmet need is likely to continue rising. This excludes the housing and business needs of New York City.~~

Using both the HUD allocation methodology and the State's additional data sources highlights that, despite the progress made to date, there remains large unmet needs arising from the storms (Table 29). This is true even when the proposed CDBG-DR allocations to New York State are accounted for. The largest unmet need remains in the infrastructure sector ~~–~~ $~~3~~1.7 billion when using HUD allocation methodology and ~~almost~~ $~~14~~12.7 billion when all identified unmet needs in this sector are accounted for. Even when HUD's high construction cost multiplier for housing and small business repair is applied, this latter number accounts for ~~almost 79~~over 80% of all unmet needs in the State.

~~THE STATE'S PROPOSED DISTRIBUTION OF CDBG-DR FUNDS IS, AS A RESULT, FOCUSED ON THE NYRCR PROGRAM, THE INFRASTRUCTURE AND MATCH PROGRAMS, AND THE RBD PROGRAM. ALL ARE AIMED AT HELPING IMPROVING THE STATE'S RECOVERY AND RESILIENCY EFFORTS.~~

TABLE 29: ESTIMATEOF UNMET NEEDS FOR HURRICANE IRENE, TROPICAL STORM LEE AND SUPERSTORM SANDY (EXCLUDING NEW YORK CITY) (IN MILLIONS)

~~-~~	~~APA6~~		~~APA8~~		~~APA8 (W/ HUD Construction Cost Multiplier~~	
	~~Unmet Need (Based on HUD Allocation Methodology)~~	~~Unmet Need (Based on NYS Methodology)~~	~~Unmet Need (Based on HUD Allocation Methodology)~~	~~Unmet Need (Based on NYS Methodology)~~	~~Unmet Need (Based on HUD Allocation Methodology)~~	~~Unmet Need (Based on NYS Methodology)~~
~~Housing~~	~~$3,525~~	~~$3,525~~	~~$2,018~~	~~$2,018~~	~~$2,906~~	~~$2,906~~
~~Economic Development~~	~~$702~~	~~$702~~	~~$624~~	~~$624~~	~~$898~~	~~$898~~
~~Infrastructure~~	~~$3,761~~	~~$11,515~~	~~$3,041~~	~~$13,994~~	~~$3,041~~	~~$13,994~~
~~Total~~	~~$7,087~~	~~$15,742~~	~~$5,683~~	~~$16,635~~	~~$6,845~~	~~$17,798~~

~~**Source:** FEMA Individual Assistance data effective December 2015, SBA Business Loan data, effective December 2014, FEMA PA data effective December 2014, Dun and Bradstreet business records for 2012, FEMA Hurricane Sandy Inundation Files, NYS Department of Financial Services Insurance Data (October, 2013), Census Data (ACS, 2007-2012 5 year average), DOT, FTA, FHWA, and USACE Sandy-related projects effective, and USDA Emergency Watershed Repair Program (December 2014).~~

-	APA15		APA15 (w/ HUD Construction Cost Multiplier)	
	Unmet Need (Based on HUD Allocation Methodology)	Unmet Need (Based on NYS Methodology)	Unmet Need (Based on HUD Allocation Methodology)	Unmet Need (Based on NYS Methodology)
Housing	$1,294	$1,294	$1,863	$1,863

Economic Development	$476	$476	$685	$685
Infrastructure	$1,719	$12,672	$1,719	$12,672
Total	**$3,489**	**$14,442**	**$4,267**	**$15,220**

Source: GOSR Programmatic Data (November 2016). HUD high construction cost multiplier of 1.44 applied after state interventions for housing and economic development.

C. NY Rising Homeowner Recovery Program

Description of Changes: The NY Rising Homeowner Recovery Program is now closed to new applications. This change clarifies that assistance provided for the purpose of replacing damaged manufactured housing may take the form of housing incentives.

From page 52 of the New York State Action Plan

Activity Type: Repair, reconstruction, and mitigation of residential owner-occupied structures, and housing incentives

National Objective: Low- to Moderate- Income or Urgent Need

Geographic Eligibility: Disaster-declared counties outside of New York City

Eligible Activity: Sec. 105 (a) (4) 42 U.S.C. 5305(a)(4); Housing Incentives per FR-5696-N-01 (VI) (B) (29)

Eligible Applicants: This Program is available to owners of one- and two-unit owner-occupied homes, including condominiums, co-ops, and garden apartments, that are located outside of New York City with damage from Hurricane Irene, Tropical Storm Lee, and/or Superstorm Sandy.

Program Description: The NY Rising Homeowner Recovery Program includes the following components:

- Reimbursement: The Program provides reimbursement for eligible costs incurred by homeowners for completed home repair or reconstruction activities.
- Repair: The Program pays for approved and eligible costs to complete repairs to homes that have not yet been completed.
- Reconstruction: The Program pays for approved and eligible costs of reconstruction when a home is destroyed or determined not feasible to repair.
- Resiliency Measures: Resiliency measures such as home elevation, bulkhead repairs, and other storm mitigating measures, which help minimize future flood damage to storm-damaged Properties, are eligible funding activities.
- Housing Incentives: The Program provides housing Incentives to allow purchase of new manufactured housing units to replace storm-damaged manufactured housing.

New section within the NY Rising Homeowner Recovery Program

D. NY Rising Housing Flood Insurance Program

Description of Changes: The NY Rising Housing Flood Insurance Program is a new program that will allow the State to provide LMI applicants participating in the NY Rising Homeownership Program, NY Rising Rental Property Program, or the NY Rising Affordable Rental Opportunity, with funding for flood insurance premiums. Insurance premiums will be provided directly to FEMA's National Flood Insurance Program in exchange for applicants signing a grant agreement which requires the maintenance flood insurance in perpetuity, if applicable.

New section within the NY Rising Homeowner Recovery Program

Program: NY Rising Housing Flood Insurance Premiums

Activity Type: Repair, reconstruction, and mitigation of residential owner-occupied structures; condominium and cooperative structures; and rental properties

National Objective: Low- and Moderate- Income (LMI)

Geographic Eligibility: Disaster-declared counties outside of New York City

Eligible Activity: HCD Act Section 105 (a)(4) 42 U.S.C. 5305(a)(4)

Eligible Applicants: LMI recipients of awards in the NY Rising Homeownership Program, NY Rising Rental Property Program, or the NY Rising Affordable Rental Opportunity.

Program Description: Applicants to the NY Rising Homeownership Program, the NY Rising Rental Property Program, and the NY Rising Affordable Rental Opportunity are required to maintain flood insurance to ensure that CDBG-DR assisted properties are protected from future disasters. The initial costs associated with federal flood insurance requirements can be a major obstacle for vulnerable populations served by GOSR's Housing programs. To protect the CDBG-DR investment and to serve the State's most vulnerable applicants, where applicable, GOSR proposes to use a portion of each housing allocation to provide LMI households in these programs with assistance in obtaining required flood insurance. This assistance will cover the costs of initial flood insurance premiums for properties covered by the Flood Disaster Protection Act of 1973, as amended, pursuant to 24 CFR 570.605.

Initial insurance premiums will be provided directly to the insurance provider in exchange for applicants signing a grant agreement which requires the maintenance of hazard and flood insurance in perpetuity, if applicable. The Program will provide flood insurance coverage for up to one year after execution of a final grant agreement.

Eligible Applicants:

- Applicants determined by the program to meet the LMI national objective.
- Applicant must be recipient of CDBG-DR grant funds in the NY Rising Homeownership Program, NY Rising Rental Property Program, or the NY Rising Affordable Rental Opportunity.
- Applicant must have received 100% of funding for eligible expenses outlined in an inspection report and completed all repairs identified on the Estimated Cost to Repair (ECR) report.
- Flood insurance assistance will be included in the eligible applicant's award amount and cannot exceed program caps.
- Applicants who have never obtained insurance coverage in the amount to be covered by the CDBG-DR investment.

E. Manufactured Home Community Resiliency Program

Description of changes: The Manufactured Home Community Resiliency Program was approved in the State's APA 13. This Amendment specifies the manufactured home community identified for this program and identifies the eligible activities the State will undertake.

From page 67 of the New York State Action Plan

Manufactured Home Community Resiliency Program

Activity Type: Homeownership assistance, housing incentive for purchase of a new manufactured home, housing incentive for the residential rental assistance, housing incentive for moving allowance, and demolition.

Eligible Activities: 105 (a) all provisions; 42 U.S.C. 5305(a), Housing Incentives per FR-5696-N-01 (VI) (B) (29)

National Objective: Low- ~~and~~to Moderate- Income or Urgent Need

Geographic Eligibility: Disaster-declared counties outside of New York City

Eligible Applicants: Owners or renters of manufactured homes, owners of land on which a manufactured home or a concentration of manufactured homes are located, and municipalities with ~~MHCs~~manufactured home communities located in the 100- and 500- year floodplain in disaster-declared counties that sustained damage from Hurricane Irene, Tropical Storm Lee, and/or Superstorm Sandy.

Program Description:

The NY Rising ~~MHCRP will select~~ Manufactured Home Community Resiliency Program (MHCR Program) is designed to assist vulnerable ~~MHCs, as funding permits,~~ manufactured home communities that require a comprehensive, community-wide solution to recovery. ~~Ongoing outreach to identify additional communities will be conducted through contacts with stakeholders including but not limited to~~

As of APA15, the State ~~agencies, local governments, non-profit agencies, and existing community connections.~~

~~The criteria below have been developed to help assist the selection process and may evolve as~~has identified one MHC – Ba Mar (hereinafter, the ~~State solidifies program design and engages in additional community consultations.~~

~~Proposed criteria used~~"MHC") – to ~~assist~~participate in the ~~selection of a community(ies) may include, but is not limited to~~MHCR Program based on the following criteria: (1) location in the floodway or the 100- or 500-year floodplain and its degree of vulnerability as determined by FEMA criteria; (2) a concentration of LMI residents; (3) the number of individual ~~Applicants~~applicants from ~~a~~the community ~~who are~~ already enrolled in the NY Rising Housing Program; (4) level of damage sustained during a Qualifying Storm; ~~(~~5) the community's proximity to additional storm recovery investments; and, (6) interest from the community and the local government.

Upon selection of ~~such community(ies),~~the MHC, a comprehensive community-based planning process modeled after the NY Rising Community Reconstruction Program ~~will commence~~, was commenced for the purpose of developing the best comprehensive resiliency solutions tailored to the specific needs of individuals in the ~~community(ies). Potential program activities may include~~ MHC. Based on an analysis of the MHC's specific needs, the MHCR Program will engage in the following eligible activities:

~~1. Buyout of the property: The land on which the community is located may be purchased as a buyout. Such property will be restricted in perpetuity for uses compatible with open space, recreation, or wetlands management practices. Property will be purchased at 100% of pre-storm Fair Market Value, as established by an appraisal conducted by a firm meeting federal standards.~~

~~2. Clearance and demolition: Property which has been acquired through buyout may be cleared and existing structures demolished in order to facilitate its use as open space, recreation, or for wetlands management.~~

~~3. Acquisition of property outside of floodplain: Property outside of the floodplain may be purchased. Such property may include vacant land purchased for the purpose of relocating residents to a new MHC or acquiring land or an existing building to be used as a permanent affordable housing development.~~

~~4. Construction of new housing or improvements at existing location: On site upgrades to communities may include elevation, replacement of manufactured homes, infrastructure improvements, storm protection measures, etc. Construction of new MHCs may include clearance and demolition, land preparation, infrastructure, installation of new manufactured homes, etc. Development of new housing may include construction or rehabilitation of permanent affordable housing.~~

Housing incentive for new manufactured home replacement: In accordance with "Housing Incentives" per FR-5696-N-01 (VI)(B)(29) and similar to the manufactured home component of the NY Rising Homeowner Recovery Program, the MHCR Program intends to provide eligible owners with a replacement manufactured home outside of the storm-impacted MHC.

1.

Housing incentive for residential rental assistance: In accordance with "Housing Incentives" per FR-5696-N-01 (VI)(B)(29), the MHCR Program will provide eligible residents up to three months rental assistance plus a housing incentive equivalent to up to 39 months of rental assistance (in accordance with FR–5696–N–01, hereinafter, the "March 5th Notice," which allows for a ~~-~~housing incentive to be provided in conjunction with an eligible activity).

2.

Homeownership assistance: ~~Down~~In accordance with §105(a) (24) 42 U.S.C. 5305(a) (24) and as amended in the March 5th Notice, the MHCR Program will provide up to 100% down payment and closing cost assistance ~~may be provided~~ to households of up to 120% of area median income (AMI) as well as mortgage principal write down assistance ~~of payment towards the principal~~ to ensure that the property is affordable to the applicant.

3.

~~5.~~ Housing Incentive for ~~residents of relocated communities to assist in the purchase of a fee simple home, condominium, or cooperative housing unit. Homeownership counseling may also be provided.~~

4. ~~Relocation payments and assistance: Relocation benefits will be provided~~moving assistance (Moving Assistance): In accordance with "Housing Incentives" per FR-5696-N-01 (VI)(B)(29), the MHCR Program will provide a one-time payment for storage and moving costs substantially similar to benefits offered by the Federal Highway Administration Uniform Relocation Assistance, where applicable to all eligible and current residents of ~~manufactured homes~~the MHC.

5. Clearance and demolition: ~~-~~In accordance with §105(a)(4) 42 U.S.C. 5305(a)(4), the MHCR Program will clear and demolish the MHCR Program eligible applicants' storm-damaged MHUs, located in ~~a~~ the MHC, as a condition of participation in the MHCR Program

See below~~:~~ for a more detailed description of each activity.

- ~~Permanent relocation assistance as defined by 24 CFR 570.606(d): Provided to owners and renters of manufactured homes located in a MHC approved for buyout under the MHCRP. These involuntary relocatees will be provided with permanent relocation assistance as required through the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (URA). This assistance may include support in locating, moving to and renting/purchasing a home in a newly developed MHC or a fee simple home, condominium or cooperative housing unit.~~
- ~~Other relocation assistance as required through URA: Those who are renters will receive assistance through URA. This assistance may include support in locating and renting housing.~~

- ~~Optional long-term rental assistance (no longer than three years): Provided to owners of manufactured homes located in a MHC approved for inclusion in MHCRP but not subject to buyout will be provided temporary relocation assistance. This assistance may include support in locating and renting housing. This assistance will be provided during the term that on-site improvements are being made to a MHC.~~
- ~~Optional personal property moving/storage assistance (no longer than three years): Provided to owners of manufactured homes located in a MHC approved for inclusion in MHCRP but not subject to buyout, whose belongings must be transported and stored during the period of relocation.~~

Maximum Award:

The MHCR Program has set the following award cap amounts and allowances. The base cap is determined by the eligible applicant's household size. The base cap amount is based on the cost to purchase, install, and connect a replacement manufactured home for that household size.

- Base Cap:

Household Size	Manufactured home size	Maximum Award (without deducting applicant Duplication of Benefits (DOB))
1 or 2 people	2 bedroom/2 bath	$105,000
3 people	3 bedroom/2 bath	$115,000
4 + people	4 bedroom/2 bath	$125,000

- Allowances:
  - The MHCR Program will require applicants to demolish storm-impacted manufactured homes and cover the cost of demolition of the storm-damaged manufactured homes for all eligible applicants. The demolition costs are not subject to the base cap.
  - The MHCR Program will offer moving assistance for eligible current MHC residents. The relocation costs are not subject to the base cap.

~~**HOUSING INCENTIVE FOR A NEW MANUFACTURED HOME**~~

1)

The MHCR Program will provide a replacement manufactured home to be placed on land purchased by the applicant or within another manufactured home community, outside of the floodplain to eligible applicants who choose this option. This MHCR Program seeks to use the NY Rising Homeowner Recovery Program's Mobile Home component as precedent, wherever feasible.

Basic Eligibility: To be eligible for this benefit, an applicant must demonstrate that s/he holds title to a storm-impacted manufactured home in the MHC and that the home does not meet the IRS definition of a "second home."

Requirements: For an applicant to receive benefits under the manufactured home replacement activity, applicants must adhere to the following requirements:

- Agree to demolish or allow the MHCR Program to demolish the storm-impacted manufactured home;
- Must relocate outside of the floodplain, unless, at the MHCR Program's sole discretion, a hardship exception is granted;
- ~~Execute all required grant agreements, intake documents, and subrogation commitments.~~
-

HOUSING INCENTIVE FOR RESIDENTIAL RENTAL ASSISTANCE

2)

The MHCR Program will provide eligible applicants with 42 months of Rental Housing Incentive payments assistance a permanently displaced tenant may have been eligible for under the Uniform Relocation Act (URA). The housing incentive will be based on fair market rent multiplied by 42 months and will be substantially similar to the benefits offered to tenants permanently displaced by the federal funds as required by the URA. As this MHCR Program is voluntary a housing incentive is necessary to encourage participation in the MHCR Program by the largest number of MHC residents.

Eligibility: To be eligible for this benefit, an applicant must demonstrate that s/he currently resides in a storm-impacted manufactured home in the MHC.

Requirements: For an applicant to receive benefits under the rental assistance option, applicants must adhere to the following requirements:

- Agree to demolish or allow the MHCR Program to demolish the storm-impacted manufactured home;
- Must relocate outside of the floodplain, unless, at the MHCR Program's sole discretion, a hardship exception is granted;
- Execute all required grant agreements, intake documents, and subrogation commitments.

HOMEOWNERSHIP ASSISTANCE

3)

The MHCR Program will provide applicants with 100% of down payment and closing cost assistance for applicants earning up to 120% of AMI. When an applicant identifies a new home and a Federal Deposit Insurance Corporation (FDIC) insured bank is willing to provide a mortgage for the purchase of the identified home, the MHCR Program will provide the full down payment determined to be necessary and reasonable to enter into a contract for sale, along with the customary closing costs needed to secure a mortgage. Where the MHCR Program confirms that the monthly housing cost of the new home will exceed 30% of an applicant's gross income, the MHCR Program will provide assistance to pay down the principal balance. Payment towards principal will be calculated based on the assistance necessary to ensure monthly housing payments to a mortgage servicer do not exceed 30% of property owner's gross income to pay a 30-year fixed-rate mortgage that includes principal, interest, taxes and insurance.

Basic Eligibility: To be eligible for this benefit, an applicant must demonstrate that s/he resides in a storm-impacted manufactured home in the MHC which does not meet the IRS definition of a "second home."

Requirements: For an applicant to receive benefits under the homeownership assistance option, applicants must adhere to the following requirements:

- Agree to demolish or allow the MHCR Program to demolish the storm-impacted manufactured home;
- Must relocate outside of the floodplain, unless, at the MHCR Program's sole discretion, a hardship exception is granted;
- Execute all required grant agreements, intake documents, and subrogation commitments.

HOUSING INCENTIVE FOR MOVING ASSISTANCE

4)

The MHCR Program will provide all eligible applicants with a moving cost incentive in the form of a lump sum reimbursement to cover moving costs associated with a one-time move from the storm-impacted MHC. The benefits provided in this component will be substantially similar to the relocation benefits offered to tenants permanently displaced by federal funds and subject to the URA. Specifically, the MHCR Program will provide an award in the amount of the *Fixed Payment for Moving Expenses* outlined in Federal Register Notice 80 FR 44182.

This incentive for moving assistance will be offered in addition to the above-mentioned housing incentive for new manufactured home, housing incentive for residential rental assistance, and homeownership assistance options and is not subject to the maximum award cap.

Eligibility: To be eligible for this benefit, applicants must meet the requirements outlined in either the housing incentive for new manufactured home, housing incentive for residential rental assistance, or homeownership assistance; and, provide evidence that the applicant has relocated outside of the storm-impacted MHC and outside of the floodplain (unless a hardship exception has been granted by the MHCR Program).

Requirements: Applicant must provide evidence that s/he resided at the MHC, relocated outside of the storm-impacted MHC, and elected to participate in either the housing incentive for new manufactured home, housing incentive for residential rental assistance, or homeownership assistance.

CLEARANCE / DEMOLITION

5)

The MHCR Program will clear and demolish the MHCR Program eligible applicants' storm-damaged MHUs, located in the MHC, as a condition of participation in the MHCR Program. The cost allowance for clearance and demolition will be offered in addition to the housing incentive for new manufactured home, housing incentive for residential rental assistance, and homeownership assistance options and is not subject to the maximum award cap.

Eligibility: To be eligible for this benefit, applicants must meet the requirements outlined in either the housing incentive for new manufactured home, housing incentive for residential rental assistance, or homeownership assistance.

Requirements: Applicant must provide evidence that s/he resided at the MHC, relocated outside of the storm-impacted MHC, and elected to participate in either the housing incentive for new manufactured home, housing incentive for residential rental assistance, or homeownership assistance.

F. Rebuild by Design Projects

Description of changes:
In accordance with the requirements of the August 15, 2016 *Federal Register* Notice, the State of New York is submitting a second substantial APA that includes a detailed description of the Living Breakwaters Rebuild by Design project. Additionally, this APA provides minor updates to the Living with the Bay project. Note: A separate second substantial APA for Living with the Bay Rebuild by Design project will be submitted at a later date.

From page 94 of the New York State Action Plan:

Rebuild by Design Projects

After Superstorm Sandy's devastating sweep over the northeastern part of the United States, President Obama created the Superstorm Sandy Rebuilding Task Force (the Task Force) with the purpose to redesign the approach to recovery and rebuilding through regional collaboration and emphasis on the growing risks of climate change. The Task Force partnered with HUD to initiate the Rebuild by Design (RBD) competition, devised to invite the world's most talented designers and engineers to bring their expertise in flood mitigation and coastal resiliency to Sandy impacted regions. The six RBD competition finalists were announced on June 2, 2014. Two of the six projects were awarded to New York State to implement.

TABLE 364: NEW YORK STATE AWARDED PROPOSALS

Project	Location	Total ~~Proposed~~ Project Cost	CDBG-DR Allocation
Living Breakwaters: Tottenville Pilot	Richmond County	$~~73,904,000~~~~66~~75,500,000*	$60,000,000
Living with the Bay: Slow Streams	Nassau County	$177,366,078	$125,000,000

**At 30% ~~percent~~% design ~~not including contingency~~.*

The goals of New York State's RBD implementation plan are to make communities in Richmond County (Staten Island) and Nassau County (Long Island) more physically, economically, and socially resilient in the face of changing climate and volatile storm events. Both proposed projects represent innovative, flexible, and scalable interventions that could be replicated in other parts of the State, nation, and globe. Each project will undergo a rigorous environmental review and permitting process, which will include the assessment of potential alternative designs and/or projects.

Monitoring plans for large scale projects such as ~~the Living Breakwaters and the Tottenville Dune Project~~RBD must be developed in coordination with federal and State permitting agencies, as well as following a rigorous data collection and data review program during design. ~~-~~GOSR understands the need to develop long-term monitoring plans and will do so during the design and environmental review phases. ~~The specific m~~The m~~M~~onitoring plan strategy~~ies~~ for Living Breakwaters: Tottenville Pilot is described in the project section below, and the monitoring plan strategy for Living with the Bay: Slow Stream ~~both projects~~ will be set forth in an upcoming~~the~~ project specific action plan amendment~~s~~.

Living Breakwaters: Tottenville Pilot

National Objective: Low- and Moderate- Income and Urgent Need

Eligible Activity: Rebuild by Design

CDBG-DR Allocation: $60,000,000

Project Description: Richmond County (Staten Island), one of the City of New York's five boroughs, sits at the southernmost part of New York State. The island is at the mouth of the New York Bight, the waters off the Atlantic Coast extending from the Cape May Inlet in New Jersey, to Montauk Point on the eastern tip of Long Island. The tidal waters surrounding the Borough shape its myriad industries; transportation,

housing, and culture. In October 2012, Superstorm Sandy devastated Staten Island's east and south shore neighborhoods. The driving wave action bombarded the coastline, damaging or destroying an unprecedented number of Staten Island homes and businesses, resulting in loss of life and significant harm to the local economy. Tottenville, a community at the southernmost point of Staten Island, experienced some of the most destructive waves in the region during Superstorm Sandy. Historically known as "The Town the Oyster Built," the community was once protected by a wide shelf and series of oyster reefs, much of which was harvested by local oystermen. Today, much of the shore of Staten Island is void of these natural systems, and remains exposed to wave action and coastal erosion.

FIGURE 4: MAP OF STATEN ISLAND AND NEW YORK BIGHT

HAMweather, 2014

Living Breakwaters: Tottenville Pilot (Living Breakwaters) is an innovative coastal green infrastructure project that aims to increase physical, ecological, and social resilience. The project is located in the waters of Raritan Bay (Lower New York Harbor) along the shoreline of Tottenville and Conference House Park, from Wards Point in the Southwest to Butler Manor Woods in the Northeast. The project area is a shallow estuary that has historically supported commercial fisheries and shell fisheries. This project also fulfills New York City's Resilience Plan Coastal Protection Initiative 15[ix].

The Living Breakwaters project consists of:

(1) A system of specially designed breakwaters and physical habitat enhancements on the breakwater system, including shellfish (oyster) restoration on the breakwaters (along with an area of shoreline restoration along the shoreline);
(2) Oyster cultivation and activities supporting oyster restoration including: oyster cultivation (hatchery expansion, remote setting facility, etc.), shell collection and curing, and the installation of oyster nurseries;
(3) A community Water Hub and accessory seasonal dock. The Water Hub is an on-shore public facility (building and site) that would provide a physical space for access to the waterfront as well as orientation, education and information on shoreline resiliency, community gathering space and equipment storage for NYC Department of Parks and Recreation (NYCDPR) maintenance; and
(4) Programming including educational, stewardship, and capacity-building activities related to the above.

In addition to the Living Breakwaters project described above, an additional project was proposed by the Staten Island New York Rising Community Reconstruction (NYRCR) Committee Plan. Working collaboratively with the NYCDPR and the New York City Mayor's Office of Recovery and Resiliency, the Tottenville Shoreline Protection Project (TSPP) would provide shoreline protection features as a coastal resiliency strategy for the Tottenville area from approximately Carteret Street to Page Avenue. The TSPP would be a separate project from Living Breakwaters, but the two projects would complement each other

to reduce risk, enhance ecology, and foster community and stewardship along the Tottenville shoreline. The environmental review of both projects will be jointly addressed in a single Environmental Impact Statement (EIS). If approved, the TSPP would be designed by a separate design team from the Living Breakwaters ~~roject~~project however, the design of the two projects would be coordinated given their overlapping objectives and functions.

~~The Living Breakwaters pilot project, located along the coast of Tottenville, proposes to attenuate waves through a system of in-water breakwaters, constructed of a concrete and recycled glass composite. The in-water breakwaters are seeded with oysters that will proliferate and physically grow the breakwater over time. Living breakwaters are similar to conventional breakwater construction; however, this system is designed to provide additional environmental co-benefits, including improved water quality and new marine habitat. Along with protecting shoreline structures and residents, the Living Breakwaters project will also promote resiliency across the Island's many neighborhoods through social resiliency focused training and education programs.~~

~~FIGURE 5: CONCEPTUAL PROJECT DESIGN OF ALL PHASES~~PROPOSED LIVING BREAKWATERS PROJECT DESIGN

~~**Source:** Governor's Office of Storm Recovery, 2016Scape 2014~~

Living Breakwaters ~~proposes~~ is a comprehensive approach to resiliency through two ~~potential~~ components:

1. ***Off-Shore:*** The construction of a system of breakwaters along the coast of Tottenville to ~~, protecting adjacent communities~~attenuate wave energy, addressing both event-based and long-term shoreline erosion along with preserving beach width, and providing habitat for~~reviving~~ marine ecologies. The project also includes an area of shoreline restoration~~beach fill~~.
2. ***On-Shore:*** The construction of an on-shore community Water Hub to promote social resiliency. The Water Hub will provide a place for community education on coastal resiliency efforts directly tied to and building off the structural components of the ~~this resiliency initiative~~Living Breakwaters ~~p~~project~~would include classrooms and labs, engaging Staten Island schools in waterfront education, oyster restoration, and reef building, and cultivating long-term estuary stewardship~~. ~~The Tottenville Water Hub may also include recreation lounges, exhibition space, and nature observation decks.~~

The Living Breakwaters ~~p~~project would significantly compliment~~s other NY Rising recovery and resiliency efforts in the Tottenville community~~the TSPP noted above. Throughout the development of the Living Breakwaters ~~p~~project ~~concept~~, the design team worked closely with many community partners, including the Staten Island NYRCR Planning Committee (Committee). The Living Breakwaters ~~p~~pilot project design team would work closely with the design team of the TSPP ~~incorporates the "Tottenville Dunes and Coastline Dune Plantings" project proposed in the Staten Island NYRCR plan~~. The ~~dune project~~TSPP may include a system of shoreline protection treatments including an earthen berm, stone-core sand-capped dune, eco-revetment, with a pathway, and a raised edge (revetment and trail). ~~and an armored raised trail and paved pathway.~~ The project would support the goals of Living Breakwaters – helping to protect communities from damaging wave action and improve access to the waterfront, while also providing a level of protection from coastal flooding. ~~, w~~While independently valuable, the TSPP would~~ill~~ be further strengthened by the Living ~~b~~Breakwaters ~~p~~project, as the breakwaters will protect the dunes, ~~dunes (and~~the adjoining beach area~~)~~, and other on-shore project elements against harmful effects caused by coastal erosion. As mentioned above, ~~T~~the State ~~will ensure that is~~will be coordinating design efforts of both the Living Breakwaters and the TSPP with various New York City agencies ~~the design~~ and through the environmental review ~~of the breakwaters and dunes projects are coordinated to maximize the complementary nature of the projects, ensure robust public review of the changes in this community, and to fully consider cumulative impacts and benefits during the environmental review process~~.

Since the approval on April 13, 2015 by HUD of New York State's Action Plan Amendment 8 (APA 8), ~~T~~the ~~RBD~~ Living Breakwaters ~~p~~project has progressed from conceptual plan through the 30% ~~percent~~ design phase. ~~, as outlined below, identifies an implementation plan on par with the current conceptual nature of the proposed project.~~ Through the planning~~,~~ and ~~and~~ design and engineering phase, the State ~~is~~has work~~ed~~~~ing~~ closely with the design teams as well as with the State's environmental team to further identify

the technical challenges and solutions needed to construct this ground-breaking project. The State has consulted various federal, state and city agencies, as well as non-governmental ~~orgnzations~~organizations, on project design. ~~-~~The State has filed for the necessary permits to construct the Living Breakwaters p~~p~~roject ~~will also undergo State and federal environmental review and permitting~~and has published the ~~dD~~Draft Environmental Impact Statement ~~Environmental Impact Statement~~(DEIS) for the project. On April 1, 2015, the State published the *Coastal and Social Resiliency Initiatives for Tottenville Shoreline, Staten Island, NY* – Environmental Impact Statement Draft Scope of Work[x] (Draft Scope of Work). Along with the ~~, which will include many~~ opportunity for the public to provide input on APA 8, the State held two public hearings on the Draft Scope for Work for the project. On April 1, 2016, the State published the ~~l~~Environmental Impact Statement Final Scope of Work[xi] and provided responses to all comments received through the public comment process. In addition, the State formed a Citizens Advisory Committee (CAC) for the Living Breakwaters project to provide an additional opportunity for the public to advise the State on design of the project. ~~and will require an assessment of reasonable project alternatives. [Update:~~

Throughout the design phase, the State ~~GOSR has~~ expanded its technical team to include a vendor~~, that~~ that acted as an independent peer reviewer on all design elements of the project and deliverables by the design team. ~~is currently implementing a monitoring plan for a breakwater project in Florida.]~~

Off-Shore: Living Breakwaters

The off-shore breakwaters consist of a series of ecologically enhanced breakwater segments off of the southwestern tip of Staten Island. Made of a combination of hard stone and biologically enhanced concrete armor units, the breakwaters are rubble mound structures. The system has been designed to reduce or reverse erosion (grow beach), and reduce coastal storm risk through wave attenuation. A network of ecological enhancements integrated into the breakwater's physical structure ("reef streets," "reef ridges" and water retaining elements) and targeted material selection (bio-enhancing concrete) are aimed to increase biodiversity by providing various ecological niches and improving the ecosystem services provided by the structures. The project will also include active restoration of eastern oyster (Crassostrea virginica) on and within the breakwaters, as well as an oyster nursery system (floats, anchors and oyster trays) and bottom placement of "spat" (juvenile oysters) attached to shells.

~~The~~ Living Breakwaters ~~project~~ is currently at a 30% ~~percent~~ design level, with 60% and 100% ~~percent~~ design expected to be completed through the final permitting and environmental review stage.

Breakwaters System

The breakwaters system will include an estimated 10 breakwater segments, approximately 3,900 linear feet of breakwaters in total. The breakwaters will be located between 200 and 2,100 feet offshore and in water depths of approximately 2 feet to 10 feet below mean low water (NAVD88). They will be set back a minimum distance of 500 feet from the Federal Navigation Channel with most project segments set back between 1,000 and 1,500 feet from the channel.

While the breakwater segments are similar in character and construction, three breakwater types, defined largely by their differences in crest elevation and overall height, are being employed in the 30% design to meet the different bathymetric conditions, shoreline conditions, and priorities within each project zone. Each breakwater type differs in length and crest height (and thus, width). Side slopes are the same for all breakwater types. ~~-~~ In addition to the main (traditional) breakwater segment, the breakwaters are being designed to include "reef ridges" and "reef streets". These rocky protrusions (reef ridges) and the narrow spaces between them (reef streets) on the ocean-facing side of the breakwaters, will create diverse habitats

including interspaces of narrow rocky conditions within the intertidal (littoral) and subtidal (sublittoral) zones composed of textured surfaces and water retaining elements (in the intertidal zone).

The breakwaters will be primarily constructed as rubble mound (rock) structures with a bedding layer, stone core and outer layers consisting of armor stone or bio-enhancing concrete armor units. In the subtidal and intertidal areas, up to one third of the armor stone will be bio-enhancing concrete units rather than stone, creating an "enhanced" habitat surface. The bio-enhancing concrete units will be integral components of the breakwater, functioning structurally as any stone armor unit would. But, unlike typical stone, the bio-enhancing concrete units are specially designed to promote biological recruitment. The units use special concrete admixtures as well as textured surfaces to promote biogenic accretions and micro-habitat and biological community development. Some units will receive additional surface treatments beyond the basic surface texture; such treatments will include: fish hubs; oyster shell containers; tidal planters; oyster hatchery units; and tidal pool units.

A floating dock to be moored offshore, at the breakwaters, will provide access to the breakwaters and surrounding waters for restoration, research and education activities run by the New York Harbor Foundation's Billion Oyster Project (BOP), and potentially other non-profits or academic institutions. The dock will be accessible by water craft launching from the Water Hub, but should also accommodate research vessels.

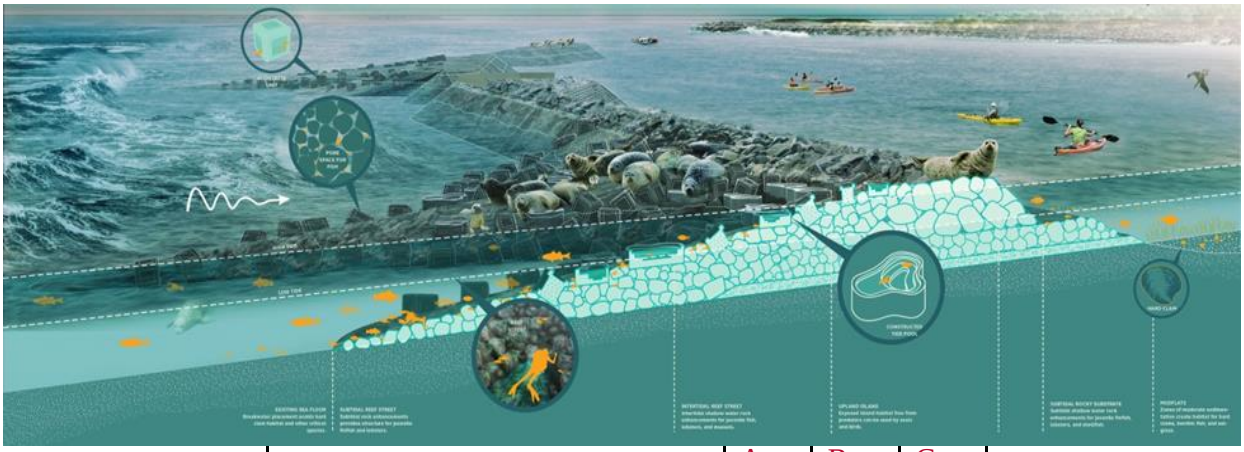
~~Table &&354A provides breakwater dimensions by type and Figure 6 provides the location of each breakwater type as provided in the permit set for the project.~~

~~The Living Breakwaters project's layered strategy introduces protective breakwaters and interior tidal flats that can dissipate wave energy and slow the water, while rebuilding sustainable marine life. The Raritan Bay and Lower New York Bay is the optimal site to cultivate a network of large scale habitat breakwaters and reefs. The Bays' shape and depth, central location, water quality conditions, tidal current flow, successful oyster restoration efforts, and risk reduction potentials all point to the shallow stretch in the Hudson-Raritan Estuary system. In addition to the direct benefits of this project, the concept is a replicable resiliency strategy that can be used elsewhere to reduce damaging wave impacts and promote new marine habitat.~~

~~The proposed breakwaters are concrete and recycled glass composite structures placed within the water column that can dissipate destructive wave energy and incorporate micro-pockets of habitat complexity to host finfish, shellfish, and crustaceans. Oysters are among the many marine species to benefit from this project through the creation of a suitable reef environment for breeding. These oyster reef structures will buffer against wave damage, flooding, and erosion, while filtering pollutants from the harbor waters and creating valuable new habitat.~~

This design explores a mix of sub-tidal beds, as well as forms that extend above the high water line that offer communities protection by dissipating wave action. The breakwaters are designed to avoid critical habitat and integrate micro-complexity, providing habitat for a diversity of species throughout the water column. Underwater, small scale pockets, or 'reef streets,' are incorporated into the breakwater and provide foraging and shelter for juvenile fish.

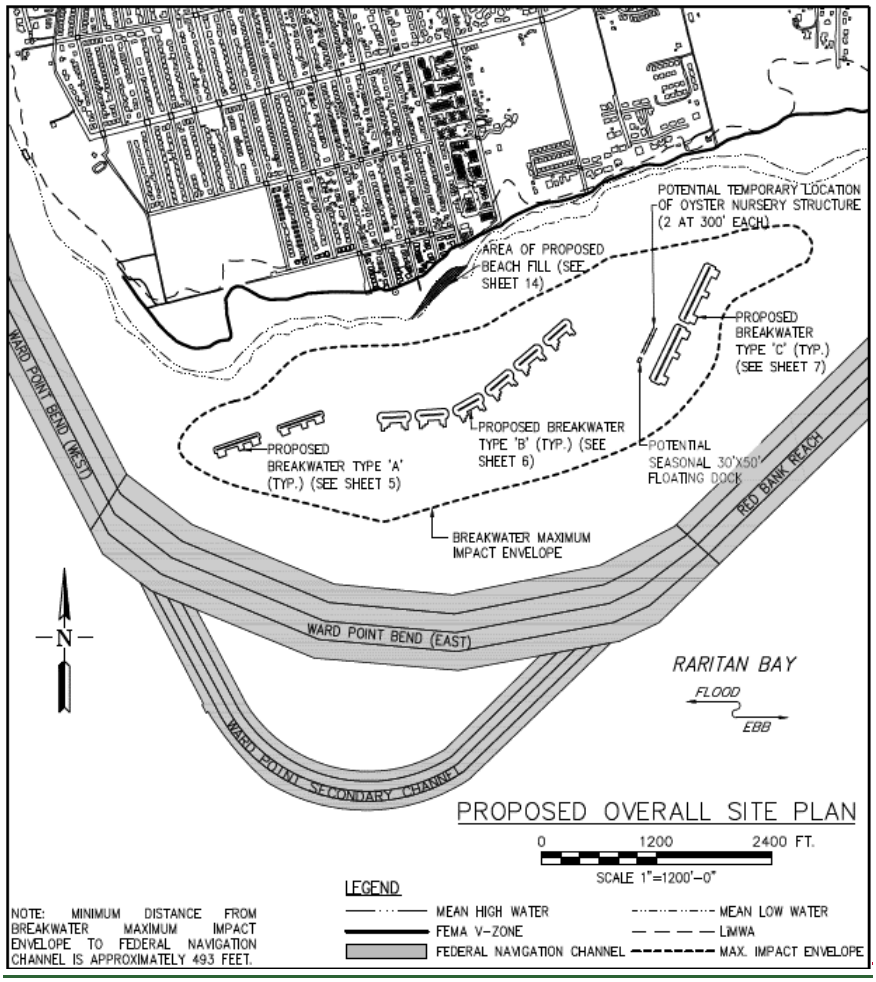
Table 354A: Typical breakwater dimensions by type



Source: Scape, 2014

	A	B	C
Crest Elevation (NAVD88)	5	14	14
Base Elevation (water depth, ft)	-6	-8	-11
Height (ft)	11	22	25
Typ. Segment Length (ft @ 0 NAVD88)	450	300	600
Approx. # of Reef Streets per segment	8	5	5
Avg. Length of Reef Streets (ft)	65	82	82

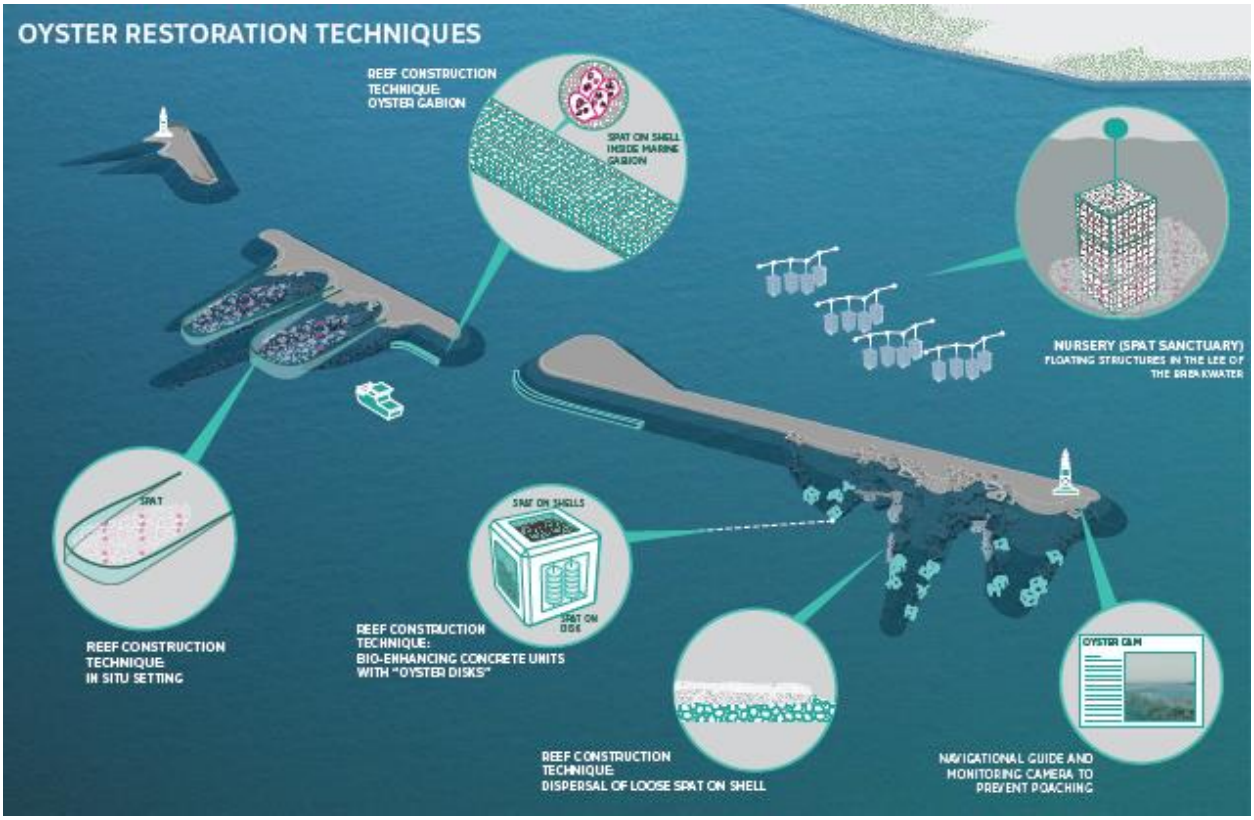
~~FIGURE 6: CROSS SECTION OF THE BREAKWATER~~30% PERCENT DESIGN: BREAKWATER SCHEMATIC DESIGN DRAWINGS



Active Restoration: Proposed Oyster Installations

Active oyster restoration on or adjacent to the breakwaters will include: incorporation of spat placement into a small percentage of the bio-enhancing concrete units, the use of oyster shell gabions (nonstructural units), spat on shell (placed in reef streets and potentially adjacent to the breakwaters), oyster nurseries and in-situ setting pilots. The oyster gabions will use the same design being employed in other oyster restoration projects in other harbor locations as part of the Hudson Raritan Estuary Comprehensive Restoration Plan. Spat-on-shell installations will be based on techniques developed and deployed during the Oyster Restoration Research Project, and oyster nurseries will be based on designs developed and currently in place or being installed by the BOP at Governors Island, Wallabout Bay and Jamaica Bay. Additional oyster cultivation efforts are being implemented prior to breakwater construction in order to support the oyster installations described.

FIGURE 5: PROPOSED OYSTER RESTORATION TECHNIQUES



Shoreline Restoration

The project includes a targeted area of shoreline restoration along approximately 800 feet of shoreline between Manhattan Street and Loretto Street. This one-time shoreline restoration will be used to construct a beach berm and establish a new shoreline at this narrow and erosion-prone location. The shoreline of the newly filled beach will change somewhat over time, but the breakwater system will hold the newly established shoreline, generating a net increase in beach width from the current condition.

On-Shore: Social Resiliency

Along with the living breakwaters, the ~~Project~~ project ~~proposes~~ includes social resiliency plans. The community Water Hub ~~concept proposes~~will provide a gathering space for lectures, community meetings, and other necessary public use. The Water Hub will join existing public and private programming as well as on-site ecological educational space and facilities. The Water Hub will provide the educational and programmatic support necessary to introduce the Living Breakwaters project to the surrounding community and visitors, provide resources and support to educators, and offer direct waterfront access and recreation

opportunities to residents. ~~Recreational activities can be expanded through new programming and waterfront access opportunities, such as kayaking and fishing. Tottenville will become a recreational destination for Staten Islanders and visitors from across the region.~~ It is ~~anticipated~~anticipated that the Water Hub will be located at the east end of Conference House Park, near the foot of Page Avenue, or in the west end of Conference House Park in or near an existing Parks building. An accessory seasonal dock would also compliment the Water Hub and provide direct water access from the shoreline. In developing the concept for the Water Hub, the State and design team worked with the Living Breakwaters CAC and the public to identify opportunities for programming at the facility. This was the main driver for the size and location of the facility. Schematic design followed by 100% ~~%~~ design for the Water Hub and accessory seasonal dock is expected to be completed in 2017. During these design phases, operating partners will be formally identified, and construction is expected to follow in 2018.

The ~~Billion Oyster Project (~~BOP~~)~~ and the New York Harbor School – operated by the New York Harbor Foundation[xii], a non-profit organization – ~~–~~are critical partners in the Living Breakwater's project to bolster Staten Island's social resiliency. In 2016, GOSR entered into a subrecipient agreement with the New York Harbor Foundation to provide funding for their work on the Living Breakwaters project. ~~A long-term and large-scale plan,~~ BOP plans to restore one billion live oysters to New York Harbor over the next 20 years while educating thousands of youth in the region about the ecology and the economy of their local marine environment. The Living Breakwaters project ~~intends to~~ builds on this foundation by working with the schools, businesses, nonprofits, and individuals that comprise BOP, to cultivate oysters and grow existing and new educational programs. Through the expansion of this coastal stewardship and educational programming, the Living Breakwaters project design ~~will~~ fosters a vibrant, water-based culture, and invests in students, shoreline ecologies, and economies. Promoting stakeholder participation in local communities will create stewards organically, ensuring long-term success of the Living Breakwaters project.

Citizens Advisory Committee

The Living Breakwaters CAC was officially formed in July 2015, and is comprised of local and regional stakeholders with diverse backgrounds. Up to 20 members may serve on the CAC. GOSR encourages applicants from all cultures and socioeconomic backgrounds in order to represent the diverse communities across Staten Island and the region. Representatives are selected by the State through on-line application submissions, or through paper submissions. The CAC has two-designated co-chairs. Serving in an advisory role, the CAC members not only represent residents of Tottenville and the adjacent communities in Staten Island, but educators, ecologists, and interested citizens from the larger New York City and New Jersey region. As of January 2017, the CAC has held six public meetings and all presentations from CAC meetings are made available on GOSR's website (https://stormrecovery.ny.gov/).

Benefit Cost Analysis

A Benefit Cost Analysis (BCA) for the Living Breakwaters project was prepared following the HUD BCA Guidance provided in a HUD Guidance Notice (CPD-16-06). The analysis was completed using generally accepted economic and financial principles for BCA as articulated in OMB Circular A-94.

The project's cumulative present value of net benefits is $13.7 million and the Benefit Cost Ratio is 1.22. These measures of project merit demonstrate that the project is viable and would add value to the community, the environment and the economy.

Using a 7% ~~-~~discount rate, and a 50-year planning evaluation horizon, the project will generate significant net benefits to the shoreline community of Tottenville, Staten Island, New York, as well as other beneficiaries from the New York metropolitan region, and regional visitors who use this community asset.

According to the BCA, the lifecycle costs to build and operate the Living Breakwaters project (amounting to $62.4 million in constant 2016 present value dollars) would generate the following quantified benefits (not including qualitative benefits that cannot be quantified):

Total Benefits of $76.1 million, of which:

- Total Resiliency Values are $53.2 million
- Total Environmental Values are $11.6 million
- Total Social Values are $8.3 million, and
- Economic Revitalization Benefits are $2.95 million.

The project's future annual benefit and cost streams, projected over the 50-year horizon were also subjected to a sensitivity analysis examining the impacts of the implementation phase and identified operational risks. The sensitivity analysis examined potential cost overruns and increases as well as significant reductions in the largest benefit categories. The results showed that the net present value of the project's benefits outweigh the costs and are robust, as they can withstand these stress events and remain positive over this period. The largest group of benefits consists of resiliency values related to wave attenuation provided by the project. The BCA demonstrates and quantifies the reduction of flood risk associated with this project.

The Living Breakwaters project BCA can be found on the GOSR website: https://stormrecovery.ny.gov/.

Maintenance and Operations

The State of New York, non-profit organizations and other government agencies involved in the construction and ownership of elements of the Living Breakwaters project will maintain and operate their respective project components. Through final design, GOSR will develop robust maintenance and operation plans along with budgets, working collaboratively with appropriate state, city and federal agencies, as well as non-profit organizations. The State of New York certifies that prior to construction and the use of CDBG-DR funds, maintenance and operation plans and budgets will be in place.

Budget

The budget amount submitted in the overall design proposal to the RBD competition for the Living Breakwaters project was $73,904,000. Based on the Living Breakwaters 30% design, the estimated overall cost for the Living Breakwaters is $75,500,000. With a CDBG-DR allocation of $60,000,000, the State will continue to explore additional funding options to fill any unmet needs and analyze the budget further to implement a reduced scale project which still meets the project objectives. The environmental review and permitting process currently underway may help shape the potential implementation requirements of the project through the 60% design phase that are not currently identified at the 30% design level.

TABLE 37~~565~~: LIVING BREAKWATERS BUDGET

Break-down	Cost
Planning	$~~1,8~~5,000,000
Pre Development	$~~4~~3,~~2~~000,000
Capital Construction Costs*	$~~51~~66,~~05~~00,000
Program Delivery	$~~3~~1,000,000

Total ~~Allocated~~ Project Cost~~Budget~~	**$~~60~~75,~~0~~500,000**

* At 30% design, includes construction of the Living Breakwaters project, which includes the breakwaters, environmental enhancements, shoreline restoration, and Water Hub

~~**Source:** Scape 2014~~

~~The budget amount submitted in the overall design proposal to the RBD competition for the Living Breakwaters project was $73,904,000. With a CDBG-DR allocation of $60,000,000, the State will explore additional funding options to fill any unmet needs and analyze the budget further to implement a reduced scale project which still meets the Project objectives. Additionally, the~~The environmental review ~~and permitting process currently underway will~~ may help shape the potential ~~implementation requirements of the Project~~ through the 60% design phase ~~that are not currently identified in the conceptual plan~~at the 30 percent~~%~~ design level. ~~The State anticipates budget changes which will be reflected in future APAs.~~

Timeline

In the 3rd Quarter ~~3~~ of 2016, the Living Breakwaters project achieved the milestone of 30% ~~percent~~% design. As of early 2017, t~~T~~he State is ~~currently~~ in the ~~pre~~ planning and design phase of the ~~P~~project~~,~~ and ~~therefore the outline below is an overarching proposed timeline for the Living Breakwaters pilot project~~continuing with design of the breakwaters through the 60% level, to be followed by 95% and 100% design, and development of construction bid documents which are expected in the 2nd Quarter of 2018. The State has also begun schematic design of the Water Hub, with final design expected in the 3rd Quarter of 2017, followed by the development of construction documents. The breakwaters project is expected to begin construction in the 2nd to 3rd Quarter of 2018; the Water Hub is expected to begin construction in the 2nd Quarter of 2018. Managed concurrently with these design efforts, the State has completed and published a Draft EIS for the project ~~Once the environmental scoping is complete, the State will adjust timelines as appropriate~~and permits have been filed with the appropriate regulatory agencies for the project.

Environmental Review and Permitting Schedule

The State has published the *Coastal and Social Resiliency Initiatives for Tottenville Shoreline, Staten Island, NY* Draft EIS for the Living Breakwaters and TSPP projects. ~~-~~The Draft EIS analyzed the environmental impacts of four project alternatives: 1) No action; 2) Construction of the Living Breakwaters project; 3) Construction of the TSPP; or 4) construction of the Living Breakwaters project and TSPP (Preferred alternative). The Draft EIS is currently under agency and public review, and the State is soliciting comments to the Draft EIS. ~~-~~It is expected that a Final EIS will be published in the 2nd Quarter of 2017.

The State has filed for necessary permits to construct the Living Breakwaters project. This includes the filing of a Joint Permit Application with the US Army Corps of Engineers (USACE) and NYS Department of Environmental Conservation (DEC). It is expected that the project will be permitted by regulatory agencies in the 3rd Quarter of 2017.

Breakwater Schedule

Concurrent to finalizing the EIS and permitting for the Living Breakwaters project, the next phase of work will include advancing the breakwaters through final design and preparation of construction documents. There are many steps that will be taken during the next phase of design to refine, modify, and test the current design scenario, and solidify the approach for final design.

Design refinement, first to 60%, then 95% and then bid documents (100%) will be the focus of the next design phase. In terms of design, engineering and modeling, this will include refinement of the breakwater system and segment design to optimize their performance relative to the project objectives, taking into account feedback on the 30% design from regulatory agencies, the Living Breakwaters CAC and other stakeholders, as well as further modeling and analysis of design options and tradeoffs. This will include refinement of breakwater design parameters like crest elevation, orientation and shape, as well as detailed design and specification of stone and other materials, scour protection, and the integration of ecological elements. This will also include refinement of the reef street design including parameters such as length, number, spacing, orientation, and location on the breakwater segment. Both numerical and physical hydrodynamic modeling will be used to test design modifications and iterations and better understand the breakwaters' influence on sediment transport, potential scour, water circulation, and wave conditions. The next phases of design refinement will also include close coordination with the TSPP design team.

Completion of 60% design of the breakwaters is expected in the 2nd to 3rd Quarter of 2017; Completion of 95% design is expected in the 4th Quarter of 2017; and completion of 100% design is expected in the 1st Quarter of 2018.- Procurement for breakwaters construction is anticipated to take place in the 2nd Quarter of 2018 with construction to follow. Construction is expected to take up to 18 months to complete, depending on permitting restrictions.

Water Hub Schedule

To date, the State has completed a Water Hub feasibility study. Based on this study, in close coordination with the NYCDPR, and project partners, including the Billion Oyster Project, the Water Hub will advance to 10% and schematic design, followed by the development of construction documents (100% design) and construction.

The State, working with the Living Breakwaters design team, governmental partners and the CAC, will continue to design the Water Hub based on future utility access surveys, geotechnical data, tree surveys, construction feasibility, programming needs and budget.

Completion of 10% design of the Water Hub is expected in the 1st Quarter of 2017; Completion of schematic design is expected by the 2nd to 3rd Quarter of 2017; and completion of final design (construction documents) is expected in the 3rd to 4th Quarter of 2017. Based on the length of the construction procurement process, construction of the Water Hub is anticipated to begin in the 2nd to 3rd Quarter of 2018. Construction may take up to one year to complete.

Oyster Restoration and Social Resiliency Schedule

The New York Harbor Foundation entered into a sub-recipient agreement with GOSR in the 4th Quarter of 2016 to continue work on oyster cultivation and education / stewardship efforts needed to support the Living Breakwaters project, as well as to refine the design of oyster installations for the breakwaters and provide input on the Water Hub program and design. The agreement and scope of work runs through the 2nd Quarter of 2018 to coincide with final design of the Living Breakwaters project. The next phase of work, up to but not including the actual installation of oysters on the breakwaters, is anticipated to include design of oyster installation and floating nursery, oyster permitting support, Water Hub programming and design support, BOP educational programs and curricula development, cultivation and propagation of oysters, continued work on installation and operation of oyster nurseries at Great Kills and Lemon Creek, development of a workforce training program, and the BOP Shell Collection and Recycling program. -All activities will run through final project design.

It is anticipated that the New York Harbor Foundation, specifically the BOP, will work closely with the breakwater design team to develop designs for the oyster installations on the breakwaters and for the floating nursery and floating dock. These elements will be integrated into the design and final design drawings of the breakwaters.

Oyster restoration activities are expected to take place after the breakwaters are constructed.

Table 38 provides the anticipated project schedule by quarter.

~~The State is committed to ensuring the timely expenditure of federal funds and will be providing a more detailed timeline in future APAs.~~

TABLE 38~~676~~: LIVING BREAKWATERS PROPOSED SCHEDULE

	Start	Finish
Living Breakwaters	**Quarter 4 2014**	**Quarter ~~1~~2 2020**
Study, Research Planning: This Phase will outline all additional studies, research and planning needed prior to the design and engineering phase. As necessary, this phase will be incorporated into the Environmental and Review and Permitting stage as well as the Engineering Phase.	**Quarter 4 2014**	**Quarter 2 2016**
Environmental Review and Permitting: This Phase will include scoping for and preparation of an environmental impact statement, as well as the submittal of permits applications to the appropriate governmental agencies. This Phase will include significant opportunities for public review and comment, as well as intergovernmental consultation. ~~-~~ Additionally, as required by State and federal law, the EIS will evaluate alternatives to the proposed project. This timeline is meant to represent an overview of the expected Environmental Review Process for all aspects of the Living Breakwaters. It should be noted that the environmental review and permitting timeline is dependent on the permitting requirements of agencies with jurisdiction, including the United States Army Corps of Engineers, NOAA - NMFS, USFWS, and the New York State Department of Environmental Conservation.	**Quarter 4 2014**	**Quarter ~~1~~ 3 ~~2016~~ 2017**
Design and Engineering: This phase will include all design and engineering work required for Living Breakwaters culminating with complete construction specs. Depending on the progress and outcome of the Environmental Review and Permitting process, this process will be able to run concurrently for some components of the project. This phase will include any and all necessary procurement and contracting as appropriate.	**Quarter 4 2015**	**Quarter ~~2~~ 1 ~~2017~~ 2018**
Site Development: This Phase will include all necessary elements for site development from the Design and Engineering Phase that will prepare for the construction phase of Living Breakwaters. GOSR will evaluate a potential phased site development schedule for different project components (e.g., upland components and in-water components) and coordination with the TSPP.	**Quarter 3 2016**	**Quarter ~~2~~ 4 2017**
Construction: This Phase will include all elements of construction related to Living Breakwaters outlined in the Design and Engineering Phase. For Living Breakwaters, the timeline is extended to reflect that the nature of the project will only allow for construction in specific building seasons. GOSR will evaluate a potential phase construction schedule for different project components (e.g., upland components and in-water components).	**Quarter 2 ~~2017~~2018**	**Quarter ~~4~~ 1 ~~2019~~ 2020**
Closeout: This phase will include the closeout of the entire project, including but not limited to: Final site visits and review, release of final contingency payments and all applicable CBDG-DR construction closeout requirements.	**Quarter 4 2019**	**Quarter ~~1~~ 2 2020**

From page 104 of the New York State Action Plan:

TABLE 4039~~40~~: LIVING WITH THE BAY PROPOSED SCHEDULE

	Start	Finish
Living with the Bay	**Quarter 4 2014**	**Quarter 3 2022**
Study, Research Planning: This Phase will outline all additional studies, research and planning needed prior to the design and engineering phase. As necessary, this phase will be incorporated into the Environmental Review and Permitting stage as well as the Engineering Phase.	**Quarter 4 2014**	**Quarter 4 2015**
Preliminary Environmental Scope Development: This phase will be an additional step for the Living with the Bay Project. The complexity of the project as currently envisioned, as well as the size of the potential study area, will require careful consideration prior to formally commencing the Environmental Review and Permitting Stage. At the same time, given the need for an expedient schedule, this preliminary phase will allow certain environmental tasks to be performed in anticipation of the formal review. ~~–~~Concurrent with the study, research and planning phase, the State will conduct preliminary environmental scoping activities. This additional planning and scope development is essential to planning a cogent and implementable project to meet the objectives of Rebuild by Design.	**Quarter 4 2014**	**Quarter 4 2015**
Environmental Review and Permitting: This Phase will include scoping for and preparation of an environmental ~~impact statement~~review consistent with the National Environmental Policy Act (NEPA), as well as the submittal of permits applications to the appropriate governmental agencies. This Phase will include significant opportunities for public review and comment, as well as intergovernmental consultation. ~~-~~ Additionally, as required by State and federal law, the ~~EIS~~ environmental review will evaluate alternatives to the proposed project. This timeline is meant to represent an overview of the expected Environmental Review Process for all aspects of the Living with the Bay Project. It should be noted that the environmental review and permitting timeline is dependent on the permitting requirements of agencies with jurisdiction, including the United States Army Corps of Engineers, NOAA-NMFS, USFWS and the New York State Department of Environmental Conservation.[xiii]	**Quarter 4 2015**	**Quarter 1 2017**
Design and Engineering: This phase will include all design and engineering work required for the Living with the Bay culminating with complete construction specs. Depending on the progress and outcome of the Environmental Review and Permitting process, this process will be able to run concurrently for some components of the project. This phase will include any and all necessary procurement and contracting as appropriate.	**Quarter 2 2017**	**Quarter 1 2019**
Site Development: This Phase will include all necessary elements for site development from the Design and Engineering Phase that will prepare for the construction phase of the Living with the Bay project. GOSR will evaluate a potential phased site development schedule for different project components (e.g., upland components and in-water components).	**Quarter 4 2019**	**Quarter 3 2020**
Construction: This Phase will include all elements of construction related to the Living with the Bay project outlined in the Design and Engineering Phase. For the Living with the Bay project, the timeline is extended to reflect that the nature of the project will only allow for construction in specific building seasons. GOSR will evaluate a potential phase construction schedule for different project components (e.g., upland components and in-water components).	**Quarter 4 2020**	**Quarter 2 2022**
Closeout: This phase will include the closeout of the entire project, including but not limited to: final site visits and review, release of final contingency payments and all applicable CBDG-DR construction closeout requirements.	**Quarter 2 2022**	**Quarter 3 2022**

From page 105 of the New York State Action Plan:

Overall Rebuild by Design Requirements

Implementation Partnerships

GOSR currently plans to serve as the grantee agency responsible for the implementation of both RBD projects. GOSR is responsible for the implementation of the entire CDBG-DR portfolio for New York State and has taken the necessary steps to build capacity since its inception in June 2013. Two program areas within GOSR have specific skills to address the RBD projects. The NYRCR Program, an award winning community-based resiliency planning and implementation effort comprised of citizen planning committees throughout the Sandy-impacted region, has worked in close collaboration with both winning RBD teams in the State of New York throughout project concept development. In addition to engaging with citizen groups, NYRCR Program has working relationships with local and county governments that will be vital to the success of these RBD projects. The second program is the GOSR Infrastructure Program. GOSR is currently undertaking numerous, large scale infrastructure projects and has demonstrated the capacity to manage these projects in a timely, cost effective manner. Engaging with federal, State, local, and private entities in other CDBG-DR projects, GOSR has demonstrated an ability to work collaboratively with other entities as needed to execute successful resilient recovery projects. It is prepared to leverage institutional knowledge and spearhead RBD project implementation. Both Programs are committed to developing innovative financing strategies that streamline recovery at the local level while maximizing available CDBG-DR funds.

The State ~~has recently updated their~~maintains up to date c~~C~~ertifications of proficient controls, processes, and procedures to ensure that the grantee has established adequate and proficient financial controls; procurement processes; procedures to prevent any duplication of benefits as defined by Section 312 of the Stafford Act; procedures to ensure timely expenditure of funds; procedures to maintain comprehensive websites regarding all disaster recovery activities assisted with these funds; and procedures to detect fraud, waste, and abuse of funds.

Further, each RBD project is subject to complex federal and State environmental review and permitting requirements, which will include the assessment of alternatives. For both projects, GOSR intends to serve as the lead agency for the environmental review and, as the projects are shaped through this process, will consult closely with interested governmental and non-governmental stakeholders. The State understands that the partnership and coordination of partners throughout the life of each RBD project is crucial for its success. ~~As the State begins~~Throughout the planning and environmental ~~process~~process, the State has ~~, there is an understanding that there will be a need to~~ engaged with numerous entities in the public and private sector.

Additionally, GOSR has an established environmental review bureau, and has procured two experienced environmental review firms to undertake ~~the EIS~~environmental review consistent with the ~~National Environmental Policy Act (~~NEPA~~)~~ process and permitting process. ~~-~~GOSR has engaged in rigorous efforts to coordinate with federal, S~~s~~tate, and local agencies concerning both projects. ~~-~~For Living Breakwaters, GOSR has engaged in multiple meetings and consultations with the Sandy Regional Infrastructure Resilience Coordination Group (SRIRC), HUD, USACE, EPA, NOAA/NMFs, DEC, DOS, New York State Office of Parks, Recreation and Historic Preservation's (State Parks) ~~New York State Parks~~State Historic Preservation Office ~~(SHPO)~~, and NYCDPR~~New York City Department of Parks and Recreation~~ throughout the 30 ~~percent~~% design phase.~~-~~ GOSR has circulated a lead agency letter, and USACE, EPA, and NOAA/NMFs, among others, have agreed to serve as cooperating agencies. ~~-~~With respect to Living with the Bay, GOSR has also engaged in consultations with the SRIRC, USACE, NOAA/MFS, DEC, State Parks, as well as seven local governments during its planning phase ~~including~~. GOSR provided a presentation on its Living with the Bay planning efforts to the SRIRC Long Island ~~TCT~~ Technical Coordination Team ~~(TCT)~~ and intends to present its revised plan to HUD, and then the Technical Coordination Team ~~TCT~~ in May 2015. ~~After this revised plan to established, GOSR will formally begin~~

~~the EIS process for Living with the Bay, and follow the same early consultation/heaving scoping strategy used for Living Breakwaters.~~

As the State moves towards the implementation phases of the RBD projects, the State will continue to assess the needs of each project and how private sector partners can be engaged to fill these project gaps. The State intends to explore options with local advocacy groups, educational institutions, for profit agencies and not for profit agencies as appropriate for each RBD project.

In 2016, GOSR entered into subrecipient agreements with the New York Harbor Foundation and New York/New Jersey Baykeeper. Both non-profit ~~orgnizations~~organizations are being provided funding to assist in Living Breakwaters project design, social resiliency planning, and ecological restoration.

The nature of the projects also indicate that the State anticipates possible engagement with federal agencies such as ~~the~~ HUD, the Army Corps of Engineers, the U.S. Department of the Interior, the U.S. Environmental Protection Agency, National Oceanic and Atmospheric Administration, U.S. National Park Service, and other partners as needed for the design and execution of each project. Within the State, there are numerous agencies that will also play specific roles in the implementation of these projects, such as New York State Department of Environmental Conservation, Department of State, Department of Education, ~~New York~~ State ~~Office of~~ Parks, ~~Recreation and Historic Preservation~~ and others to be identified as the State works through the planning and environmental phase. The State intends to facilitate its coordination and consultation efforts through the Sandy Regional Infrastructure Coordination Group convened by HUD and FEMA.

Each RBD project will also require careful consultation with local governments. For Living Breakwaters, the State ~~will~~ performed outreach to the City of New York and relevant agencies, including the Office of Recovery and Resiliency, NYCDPR~~the Department of Parks and Recreation~~, the Department of Environmental Protection, the Department of City Planning, as well as the Office of the Borough President. For~~,~~ the Living with the Bay project, GOSR will consult with the appropriate units of government that are located on Mill River to ensure that coordination for the riverine systems is addressed. This includes Nassau County, the Town of Hempstead, and villages, as appropriate. Among other areas, local governments will be involved in the environmental review process, including scoping. These transformative projects will necessitate long-term agreements between the State and relevant entities to ensure proper operation and maintenance of the projects.

~~Additionally, GOSR has already been engaged with the New York City Department of Parks and Recreation (NYCDPR) as a potential partner on certain elements of the Living Breakwaters project, and view them as a critical involved agency for purposes of the overall EIS. Indeed, to enhance Living Breakwaters purpose and need, GOSR has established a Layered Strategy by syncing the review and design of the breakwater with the review and design of a hardened dune located parallel to the breakwater. The dune was identified during the New York Rising community reconstruction planning process, and its inclusion in the overall coastal and social resiliency efforts in Tottenville has greatly enhanced the overall project. It is also noteworthy that GOSR intends to utilize the City's CEQR Technical Manual – the blueprint for conducting environmental review in New York City – in its analytical chapters, even though State agencies are not typically required to use the Manual. GOSR also engaged with New York City agencies during development of its preliminary draft scope, and received detailed comments from DPR, DEP, NYC Landmarks, Department of City Planning, and the Mayor's Office of Sustainability.~~

Additionally, GOSR has already been engaged with NYCDPR as a potential partner on certain elements of the Living Breakwaters project, and view them as a critical involved agency for purposes of the overall EIS. In July 2015, GOSR entered into a memorandum of understanding[xiv] with NYCDPR outlining processes and procedures for coordinating between the City and State as design of the Living Breakwaters project

progresses. GOSR is reviewing the project using the strictest environmental standards, as demonstrated by the fact that GOSR intends to utilize the City's Environmental Quality Review Technical Manual – the blueprint for conducting environmental review in New York City – in its analytical chapters, while according with the State Environmental Quality Review Act and the NEPA, even though State agencies are not typically required to use the City's Manual. GOSR also engaged with New York City agencies during development of its preliminary draft scope, and received detailed comments from NYCDPR, Department of Environmental Protection, NYC Landmarks, Department of City Planning, and the Mayor's Office of Sustainability.

Currently, the State expects to work with the design teams in, at minimum, the pre-planning and environmental review phases of the projects. The State has also assigned environmental scoping tasks to two of its competitively procured environmental firms. The design teams will provide requested data to the State, additional planning and budgeting documents, and any other items needed to meet the requirements of the Federal Register Notice and complete the environmental review and APA process. The State will ensure compliant procurement in all phases of work for both RBD projects.

Leveraging of Funds

The State is committed to the successful implementation of both RBD projects using the allocations provided and understands the need to identify and secure additional funding outside of the CDBG-DR allocation as needed. This includes not only identifying funds to address the unmet needs identified in the awarded phases of the project, but identifying innovative funding mechanisms to pay for the long term operation and maintenance costs of these projects. The State will look at funding opportunities such as federal or private grants, and collaboration with not for profit and academic institutions focused on similar resiliency actions, as well as financing opportunities, which can be leveraged alongside CDBG-DR for investment.

TABLE 41~~0389~~: LEVERAGING OF FUNDS – RBD UNMET NEED

Project	Location	Total Project Cost	CDBG-DR Allocation	RBD Unmet Need
Living Breakwaters: Tottenville Pilot	Richmond County	$~~73,904,00066~~75,500,000 *	$60,000,000	$~~13,904~~156~~6~~,500,000
Living with the Bay: A Comprehensive Regional Resiliency Plan for Nassau County's South Shore: Slow Streams	Nassau County	$177,366,078	$125,000,000	$52,366,078

**At 30% design.*

The process to identify funding and financing opportunities for Living Breakwaters and Living with the Bay started with a high level review of both projects as a whole and the respective component phases. By taking this approach, the State is able to elucidate a variety of layered funding and financing opportunities. Many of the grant opportunities identified are both competitive and ongoing, based upon State and federal budget appropriations.

An important initial step will involve finalizing the entities implementing each component of each RBD project and evaluating if they can provide financial support and oversight, long term operations, and maintenance capacity for the project. There are some unique financing opportunities such as public-private partnerships, but this may entail a repayment to the private partner for their work. All options should be further based upon the ability and willingness of the entity implementing the project to entertain these options.

~~From the funding and financing sources review, a description and matrix of funding and financing was created and is available in Appendix C. This matrix identifies the many funding and financing options that the State will consider and addresses the applicability to each RBD project.~~

~~The State will also look to the current CDBG-DR programs and assess the anticipated program income and how it can be used in the implementation and monitoring of the RBD projects. The State will coordinate with HUD and future APAs on the feasibility of this approach.~~

The State will utilize the following approach as the process for securing additional funding for each RBD project:

1. Prioritize Living Breakwaters and Living with the Bay project components. Isolate components of both projects and identify the following items:
    a. Initial budget, including start-up and capital costs, ongoing operations, and maintenance;
    b. Identify entities/partners to implement, operate, and maintain the project post-completion; and,
    c. Develop time horizon for initial capital costs and ongoing operations and maintenance.
2. Organize sources of funding and financing based upon the initial assessment:
    a. Identify sources of funding from entities/partners implementing and operating the projects;
    b. Leverage funding and financing matrix and prioritize funding opportunities based upon grant funding application dates and probability of success;
        i. Develop a layering strategy for each project component;
    c. Identify if financing structures would be applicable to any components of both projects;
        i. Identify ability and willingness of local municipal partners to issue debt or take on long-term liabilities involving project finance;
    d. Engage not for profit, academic, corporate, and philanthropic partners with draft program framework for funding.
3. Continually update and monitor federal, State, and local grant opportunities.

The approach outlined above is achieving success for the Living Breakwaters project. The New York City Regional Economic Development Council awarded the New York Harbor Foundation a $250,000 grant to bring oysters and their reef habitat back to the New York Harbor. This is anticipated to further the development of oyster restoration activities related to the Living Breakwaters project. Partnering with non-profit organizations and academic institutions will be key in identifying and applying for additional funds for each RBD project.

Citizen Participation Plan for Rebuild by Design

Public participation was instrumental in the development of each RBD project, as evidenced by the high level of community engagement undertaken by both design teams. This Citizen Participation Plan (CPP) advances policies and procedures that will engage a large and diverse group of stakeholders. Possible outreach strategies are described in the environmental review section as well as below. A primary outreach strategy used to implement RBD projects was ~~may be~~ the formation of a ~~Citizens Advisory Committee (~~CAC~~)~~ for each RBD project~~ which would complement the State's current outreach efforts~~. When feasible, ~~the~~ further opportunities~~y~~ for public input will be aligned with public participation in the environmental review process to ensure that the public has the ability to learn about the projects and also submit comments and concerns that will inform the assessment of potential environmental impacts and project alternatives.

The CPP reflects guidance specified by ~~the U.S. Department of Housing and Urban Development (~~HUD~~)~~ in the Federal Register (FR–5696–N–11).

The State will ensure that any Units of General Local Government ~~(UGLG)~~ or sub-recipients receiving funds for RBD projects will have a CPP that meets the HUD CDBG-DR regulations and takes into consideration the waivers and alternatives made available under CDBG-DR funding.

Public Outreach for Rebuild by Design

To keep the public informed throughout the RBD project scoping, environmental review, design, and construction phases, the State will undertake public outreach both through in person meetings, ~~and~~ through social and print media, and through the GOSR website. Modifications ~~will~~ have been made to GOSR's website to include project pages dedicated to the State's RBD projects. Each RBD project page ~~will~~ has~~ve~~ a subpage with project status updates and materials that are relevant to the project. Outreach may also be in-person meetings, solicitation of verbal and written comments, outreach events, online and traditional media, and ~~the formation of~~through a ~~Citizens' Advisory Committee~~CAC as appropriate throughout project design and implementation. Documents related to each project will also be made available locally, such as at libraries and local government offices.

Outreach to Vulnerable Populations for Rebuild by Design

The State ~~will~~ continues to undertake specific measures to solicit input from low- and moderate- income households and households headed by non-English speaking persons. To do this, key meetings throughout the project~~'~~s' development ~~will be~~are advertised in various languages. Translators, as well as sign language interpreters, will be present as needed. Notice of meetings will be posted in common areas of public housing and public buildings near the project site, and on the GOSR website. Meetings will be held in handicap accessible locations, and in locations served by public transportation. Scheduling meetings will take into consideration non-traditional work schedules. A local public library or publically accessible public building in or around the project site will be designated as a document repository for all materials relating to the RBD project. Materials presented at meetings will be posted online for public viewing in a timely manner. To further ensure that RBD information is accessible to all residents, all public program materials will be available in the four languages—English, Spanish, Chinese and Russian.

Citizens' Advisory Committee for Rebuild by Design

The State is firmly committed to continuing ~~c~~to maintain community engagement for both RBD projects. The State ~~may~~ has developed ~~a Citizens' Advisory Committee (~~CACs~~)~~ to complement the public outreach described above. ~~The~~ Each CAC ~~would~~ serves an advisory role, meeting and receiving updates on the project as it progresses from conceptual development through environmental review into design and eventually through construction and completion. The CACs ~~could also~~ engage~~s~~ the wider community at key points in the project development and environmental review process. All CAC meetings ~~would be~~are open and advertised to the public. ~~Should New York State form a CAC for each RBD project, it is anticipated that each CAC would include members who reside in the project area. The State will release information about the format of the CAC and how it will be formed.~~

The CAC ~~could~~ will continue to~~utilize innovative methods to~~ solicit public input through various methods, including as appropriate~~, such as~~ toll-free phone lines, mobile recording and listening booths, social media, and other online tools, in addition to more traditional means such as giving presentations at governmental facilities, senior housing sites, public housing sites, local community centers, schools and universities. To the greatest extent possible, the CAC and its public engagement events ~~will~~ are ~~be~~ coordinated with the citizen participation required for the environmental review and could extend into the building phases of the project. ~~For example, as a first step, the State could announce at a scoping hearing that it will be forming a CAC and encourage interested individuals to apply.~~ Additionally, technical staff and consultants from GOSR and other local, State, and federal agencies could make presentations and answer questions from community members in order to explain the highly technical components of each RBD project.

Forming a CAC is consistent with the model developed in the State's NYRCR Program, which was led by a community-based committee made up of local leaders and community residents. It is also consistent with

New York State's two RBD projects. The proposal for Living Breakwaters states that water hubs will be designed through community design charrettes. The Living Breakwaters CAC has been ~~could be~~ one of the entities providing input at these charrettes~~, or the CAC could be used to promote these design charrettes to the wider community~~. The Living with the Bay proposal discusses the establishment of a Bay Alliance in Phase One, which the CAC could help form.

Environmental Review for Rebuild by Design

The State plans to engage in robust and open public engagement throughout the environmental review process to ensure that the projects comply with State and federal environmental requirements and consider sound environmental practices. The State will undertake the required environmental review process in accordance with the NEPA for each RBD project, which includes multiple opportunities for public review and comment. First, the State intends to hold public meetings on the draft scope for the ~~the environmental impact statement.~~process. These public meetings will abide by the notice and scheduling requirements set forth in 24 CFR 58.56 and 58.59. The State will accept both written and oral comments from the public on the draft scope, and the State will consider these comments when preparing the final scope of the projects. The purpose of these scoping public meetings is to allow community members and community organizations, the scientific and academic community along with the public as a whole, to raise issues and concerns to be evaluated in the environmental review process. This will ensure that the review is substantively robust, as well as responsive to any community issues with the projects.

~~Following the scoping process, the State may establish a CAC for each RBD project, as described above. If the CAC is established, the State will schedule meetings of the CAC to provide updates on the ongoing environmental review process. Engaging the CAC will ensure that the community stays engaged in the process and understands the technical nature of the work that these projects entail.~~

Once the environmental review process is completed the State will ensure that the community stays engaged in the process by soliciting, considering, and responding to public comments. ~~Once the draft environmental impact statement (DEIS) is complete,~~ The State is~~will~~ conducting a second round of public meetings and comment period following the completion of the Draft EIS. The State ~~plans to coordinate these~~will also hold public meetings and comments with the RBD project-specific APA. As it prepares the final EIS, the State will consider and respond to the public comments.

On April 1, 2015, GOSR published the *Coastal and Social Resiliency Initiatives for Tottenville Shoreline, Staten Island, NY* EIS~~)~~ Draft Scope of Work[xv] for the Living Breakwaters project. Oral and written comments were received during the public scoping session held on April 30, 2015, by GOSR serving under the auspices of the New York State Homes and Community Renewal's Housing Trust Fund Corporation, and in accordance with HUD regulations at 24 CFR Part 58. GOSR accepted written comments to the EIS Draft Scope of Work through the public comment period which ended June 15, 2015. The EIS Final Scope of Work for the *Coastal and Social Resiliency Initiatives for Tottenville Shoreline, Staten Island, NY* was published on April 2, 2016[xvi]. ~~-~~GOSR comple~~t~~ted and published the draft EIS in the 1st Quarter of 2017, and will respond to agency and public comments, and incorporate feedback where necessary in the next design phase for the Living Breakwaters.

New section within the General Administration section

G. One-for-one replacement

Description of Changes: Federal Register Notice 5696-N-01waived the one-for-one replacement requirements at section 104(d)(2)(A)(i)-(ii) and (d)(3) and 24 CFR 42.375. The waiver "exempts disaster-damaged units that meet the grantee's definition of 'not suitable for rehabilition' from the one-for-one replacement requirements." The State is including its definition of "not suitable for rehabilition" in its Action Plan.

Not Suitable for Rehabilitation

GOSR defines a unit as not suitable for rehabilitation if it is

a. a storm-damaged property eligible for a buyout, or

b. a storm-damaged manufactured home in a floodway or floodplain.

Storm-damaged properties eligible for buyouts are located in certain high risk areas in the floodway or floodplain and determined to be among the most susceptible to future disasters. Floodways are the portions of the floodplain where flood hazard is generally the greatest, where structures commonly incur repeat flooding. Federal regulations prohibit funding for rehabilitation or reconstruction of a home in the floodway. Buyouts in these most susceptible areas improve the resiliency of the larger community by transforming parcels of land into wetland, open space, or stormwater management systems, creating a natural coastal buffer to safeguard against future storms.

Manufactured homes are susceptible to water damage and mold, making restoration to decent, safe and sanitary condition impractical and not cost-effective. Manufactured homes have limited capacity for safe, practical or cost-effective elevation. On-site manufactured home replacement without elevation would not result in a home resilient to future storms. Older manufactured homes constructed prior to June 15, 1976 cannot be rehabilitated to meet current HUD codes for manufactured home dwellings and would not meet municipal code requirements for lot sizes and coverage if rehabilitated.

Public Comments

The Governor's Office of Storm Recovery (GOSR) posted Action Plan Amendment 15 (APA 15) for public comment on March 22, 2017. At that time, GOSR began accepting comments on the website www.stormrecovery.ny.gov, as well as through the mail. Public hearings were also held in Richmond County on March 29, 2017; Nassau County on April 5, 2017; and Rockland County on April 20, 2017. The comment period officially ended at 5 pm on April 21, 2017.

The legal notices of these hearings and the comment period were publicized in three local non-English newspapers, La Voz Hispana (Spanish), Russkaya Reklama (Russian) and Sing Tao (Chinese), as well as Newsday, AMNY, and Staten Island Advance.

This Amendment was made accessible to persons with disabilities upon request (by telephone or in writing). Translations of APA 15 were available in Chinese, Russian and Spanish, the three most commonly used languages in the storm affected areas of New York State based on an analysis of Census data for households with members five years or older with limited English proficiency.

GOSR received four letters with comments related to APA 15, as well as comments from two commenters submitted through www.stormrecovery.ny.gov and comments from nine commenters at the public hearings. Commenters may have submitted more than one comment as part of their submission. Comments are summarized and GOSR's responses are set out below.

NY Rising Buyout and Acquisition Program

Comment

The State received an inquiry from a Village of Suffern resident regarding the NY Rising Buyout and Acquisition Program. The commenter asked about duplex semi-attached homes, and allowing additional homes to enter the program.

Response

After Superstorm Sandy, New York State established the NY Rising Buyout and Acquisition Program to help those who suffered substantial damage and the devastating effects from that storm, Hurricane Irene and Tropical Storm Lee. The Program was open to applicants throughout New York State and many in the Village of Suffern applied.

NY Rising conducted extensive outreach to residents in the Village of Suffern during the months leading up to the program application deadline, which was April 2014. Homeowners were given the opportunity to apply to all NY Rising Housing Programs; home repairs, reconstruction, elevation and buyout programs.

As the program assessed the needs of its applicants, policy changes may have been made to better serve the applicants. However, it cannot make policy changes to justify an expansion of the program to new applicants, unless it is through a hardship. A determination was made that there is a hardship for select applicants, whose neighbor, with which they share a wall, did not apply to NY Rising.

The NY Rising Buyout Program will not be able to re-open applications in the Village of Suffern or elsewhere. In this Action Plan Amendment 15, the New York State Governor's Office of Storm Recovery is requesting additional funds to meet existing commitments to NY Rising applicants.

Rebuild by Design Living Breakwaters Project

Comment

The State received an inquiry regarding dredging and tanker wash issues at Lemon Creek, Staten Island.

Response

The Rebuild by Design (RBD) Living Breakwaters project proposes a system of breakwater segments to attenuate waves along the Tottenville shoreline. The project area ends south of Lemon Creek and Lemon Creek Park, thus both locations are outside the scope of the Living Breakwaters project. However, it is intended that the Living Breakwaters concept will be a replicable model that can be applied in the future to other areas where wave attenuation and erosion control is desired.

Comment

The State received seven inquiries regarding the NY Rising Community Reconstruction Program's Tottenville Shoreline Protection Project (TSPP), specifically relating to the proposed installation of a pathway along the shoreline.

Response

The NY Rising Community Reconstruction Program's TSPP proposes the construction of shoreline improvements including an earthen berm, stone-core sand-capped dune, eco-revetment with a pathway, and a raised edge (revetment and trail) along the shoreline on property of NYC Parks. The TSPP is a separate project that is being designed to complement the RBD Living Breakwaters project. No final design decision on a pathway and a raised edge (revetment and trail) has been made, and NYC Parks will conduct community outreach as the project progresses to ensure that it will enhance public engagement with the waterfront and promote its social resiliency. The TSPP has been developed with considerable community participation, including public meetings, to provide an opportunity for the public to advise the State on design of the project.

Comment

The State received four inquiries expressing concerns regarding the impact of the RBD Living Breakwaters Project and NY Rising Community Reconstruction TSPP upon the Tottenville shoreline, including shoreline protection, wave attenuation, and erosion.

Response

The TSPP is a separate project that is being designed to complement the RBD Living Breakwaters project. The TSPP is being designed to include a variety of shoreline protection measures engineered to best address the conditions at various points along the length of the public land and to contribute to the protection of the shoreline and adjacent properties. The protection measures are expected to include an earthen berm, stone-core sand-capped dune, an eco-revetment with a pathway, and raised edge (revetment and trail). All project components will be on public land along the shoreline and will reduce risk of erosion while enhancing public engagement with the waterfront to promote social resiliency.

The Living Breakwaters project will attenuate waves along the Tottenville shoreline, offering wave protection and erosion control from Page Avenue to south of Swinnerton Street and Conference House Park. The RBD project was the result of a design competition sponsored by the US Department of Housing and Urban Development. The scope and key components of the project are being developed based on extensive engineering and modeling by aquatic experts to determine the most effective means to achieve wave attenuation, shoreline protection and erosion control. The layered approach of the RBD breakwaters, in conjunction with the TSPP interventions and other measures provide protections to greatly reduce risk to shoreline properties. Modeling has shown considerable erosion of the Tottenville beaches over the last 30 years and the proposed measures are calculated to significantly reverse this trend.

Comment

The State received seven inquiries regarding the proposed siting of the Water Hub component of the RBD Living Breakwaters project.

Response

The Living Breakwaters Draft Environmental Impact Statement (DEIS) provides two locations as options for the Water Hub, and the State will work with the community, design partners and NYC Parks on the location that is most feasible. The goal of the Water Hub is to promote social resiliency by providing access to the waterfront, orientation and education. It is intended to be accessible to the community and for educational programming for school children throughout New York City.

Comment

The State received two inquiries regarding the NY Rising Community Reconstruction Program's TSPP and drainage in the Tottenville area.

Response

Drainage is one of the elements considered in the design of RBD Living Breakwaters and TSPP. Drainage behind the TSPP is analyzed in the Infrastructure Chapter of the DEIS, which was published for public comment from March 24, 2017 to May 8, 2017. The DEIS has also been provided to the New York City Department of Environmental Protection for review and comment. The TSPP will also require a permit from the New York State Department of Environmental Conservation.

Comment

The State received an inquiry regarding the RBD Living Breakwaters project's design, environmental impact and resiliency benefits.

Response

The Living Breakwaters project is the result of an innovative, federally funded design competition. The project uses a necklace of breakwaters to buffer against wave damage, reducing erosion and thus reducing future storm risk along the shoreline. The resiliency project includes a focus on reviving ecologies through the creation of 'reef streets' that create micro-pockets of habitat complexity for local species. Every aspect of the project is being designed and fully researched by professionals with extensive experience in their specialized fields – including environmental impact assessment.

Per the Benefit-Cost Analysis (BCA), the project has a positive Benefit Cost Ratio, and is expected to achieve total benefits of $76.1 million. The largest group of benefits consists of resiliency values related to wave attenuation provided by the project. The BCA demonstrates and quantifies the reduction of storm risk associated with this project. The State has modified the BCA section of APA15 to better note the resiliency benefit of the RBD Living Breakwaters project.

Construction of the breakwaters is subject to environmental review. A DEIS was published for public comment from March 24, 2017 to May 8, 2017 and provides a comprehensive analysis of various potential environmental impacts. Environmental impacts of the breakwaters are addressed in the analysis set forth in the DEIS and its appendices, including, most notably, the extensive study of natural resources.

The environmental review process involves consultation with various federal, State, and local agencies, including, but not limited to, the Army Corps of Engineers, the National Institute of Marine Fisheries, the US Environmental Protection Agency, the New York State Department of Environmental Conservation, the New York State Department of State, the New York City Department of City Planning, and the New York City Department of Environmental Protection. The project will also require issuance of Clean Water Act permits and approvals from the Army Corps of Engineers and the New York State Department of Environmental Protection.

The process throughout the Living Breakwaters design and environmental review has been inclusive and transparent. As of May 2017, there have been six meetings of the Citizen's Advisory Committee, including meetings where members of the public had opportunities to meet with the State, its design team and its environmental review consultants to learn about the project and the regulatory process.

Comment

The State received an inquiry regarding the RBD Living Breakwaters project's impact on flood prevention.

Response

The Living Breakwaters project uses a necklace of breakwaters to buffer against wave damage, reducing erosion and creating wave attenuation, thereby reducing storm risk along the shoreline. As a result, the project's BCA demonstrates $53.2 million in resiliency benefits.

The scope and key components of the project are being developed based on extensive engineering and modeling by aquatic experts to determine the most effective means to achieve wave attenuation, shoreline protection and erosion control. The layered approach of the RBD Living Breakwaters in conjunction with the TSPP interventions and other measures provide protections to greatly reduce risk to shoreline properties.

Comment

The State received three comments regarding the maintenance plans associated with the RBD Living Breakwaters project and the NY Rising Community Reconstruction Program's TSPP.

Response

As noted within APA15, the State of New York, non-profit organizations and other government agencies involved in the construction and ownership of elements of the Living Breakwaters project will maintain and operate their respective project components. The State is developing maintenance and operation plans and has certified these will be in place prior to construction.

The TSPP is a separate project that is being designed to complement the RBD Living Breakwaters project. NYC Parks will own and manage the TSPP improvements to the shoreline. Through final design, GOSR will work with NYC Parks to develop a maintenance and operation plans along with budgets for the TSPP project.

Comment

The State received a wide-ranging inquiry relating to various aspects of the RBD Living Breakwaters project in the following categories – General; Breakwaters; Pathway, Revetment, Berms; Oysters; and Landscaping. The inquiry also related to the proposed shoreline components of the NY Rising Community Reconstruction Program's TSPP.

Response

General questions concern the purpose of the RBD Living Breakwaters project, the funding of the project, and how it was designed. The purpose of the Living Breakwaters project is to reduce wave action and thus the risk of coastal erosion, to address the impacts of storm surge and increase the resiliency of the community, thereby protecting the infrastructure, facilities and residences. The Living Breakwaters project will also enhance aquatic habitats and foster community education and stewardship. The funding for the Living Breakwaters project is provided through the US Department of Housing and Urban Development's CDBG-Disaster Recovery Grant Program specifically for the RBD projects, and the funding for the TSPP comes from the CDBG-Disaster Recovery Grant Program formula grant the State of New York received from the US Department of Housing and Urban Development. Every aspect of GOSR's projects are designed and fully researched by professionals with extensive experience in their specialized fields.

The breakwaters-related questions from the commenter concerned the design of the breakwaters, their locations, height and what benefit will they provide. The breakwaters are being designed based on a full analysis of the wave and shoreline erosion conditions in the project area to mitigate the negative effects of these forces. The design provides for 10 breakwaters totaling approximately 3,900 linear feet located

between 500 and 2,100 feet from the shoreline. There are three different breakwater designs with heights between 11 and 14 feet.

The pathway, revetment and berms-related questions received concerned the proprosed design of the TSPP shoreline improvements, the expansion of the beach, the eco-revetment with a pathway, and a raised edge (revetment and trail). The shoreline protections are designed to withstand storm wave action, overtopping of shoreline structures, and to be resilient to sea level rise. The design of the shoreline protections includes an earthen berm, a stone-core sand-capped dune, an eco-revetment with a pathway, and raised edge (revetment and trail). The height of each treatment is based on the specific characteristics and needs of each location. The final details of the design are not yet complete. Approximately 800 feet of beach restoration is currently proposed.

The oyster-related questions concerned the reintroduction of oysters to the bay and the landscaping questions concerned landscaping of the project area. The Living Breakwater project includes a proposed oyster nursery and inclusion of "reef ridges" on some of the breakwaters to provide a habitat for oyster restoration in the project area. Landscaping will be included in the shoreline protection design to achieve functional and aesthetic benefits. Plans and designs for oyster reintroduction and landscaping have not yet been finalized and are still under environmental review.

Further detail on the Living Breakwaters and TSPP can be found in the DEIS, which was released for public review and comment from March 24, 2017 to May 8, 2017. The DEIS is available on GOSR's website: https://stormrecovery.ny.gov/.

NY Rising Homeowner Recovery Program

Comment

The State received an inquiry from an applicant to the NY Rising Homeowner Recovery Program regarding their eligibility for assistance.

Response

Applicants with case-specific questions may inquire online at https://stormrecovery.ny.gov/, by phone at **1-844-9NYRISING**, or in person at either 500 Bi County Blvd, Farmingdale, NY 11735 or 3678 West Oceanside Road Suite 101, Oceanside, NY. Case management staff are available to respond to questions about program-determinations.

Upon approval of APA15, the NY Rising Housing Recovery Program will offer eligible Low- and Moderate-Income program participants temporary assistance with mandatory flood insurance payments. Case management staff will advise applicants on eligibility for this flood insurance assistance as well as other assistance available under the Program.

Endnotes

[i] Federal Register Notice (FR-5696-N-11) indicates that HUD employs a high construction cost multiplier in its updated CDBG-DR allocation methodology. In the case of New York State, housing and small business unmet needs are multiplied by a factor of 1.44.

[ii] Bronx, Kings, Manhattan, Queens, and Richmond counties.

[iii] The following summarizes the primary differences and similarities in methodology between the unmet needs assessment conducted in April 2013 and the unmet needs assessment of this report:

1. Damage Categories for Housing – Severe Damage remains at 4 feet to 6 feet of flooding. The State continues to define any unit with 1 foot to 4 feet as "Major-Low". However, when FEMA-IA data indicates a zero damage category and SBA data indicates that damage was assessed, this analysis uses the SBA data as the measure of damage and categorization. In addition, if FEMA-IA data indicates what HUD defines as a zero damage category but there is a recorded flooding of at least one foot, then the housing unit is given a HUD damage category of 3.
2. As in APA6, if the owner has insurance, then the unmet need is 20% of the damage costs not covered by FEMA. If the owner received an SBA loan, then they are determined to have no unmet need.
3. If the renter earns more than $30,000, then HUD presumes the landlord has sufficient insurance and there is no unmet need.
4. If the renter earns less than $30,000, then unmet need is 75% of damage costs. If the renter earns more than $30,000, then there is no need.
5. FEMA PA categories A and B (Emergency Measures and Debris Removal) are excluded from the estimate of infrastructure Unmet Needs
6. Local match for Federal Transit Administration projects, Federal Highway Administration projects, and U.S. Army Corps of Engineers Sandy-related projects are included in the Unmet Needs.
7. Mitigation costs for major and severe damage are included, estimated at 30% of damage costs for homes, businesses and applicable infrastructure projects with major to severe damage.

[iv] Limited to occupied housing, vacation homes and vacant properties are not part of the analysis; these units are also not eligible for FEMA assistance

[v] https://stormrecovery.ny.gov/sites/default/files/uploads/fact_sheet_on_optional_items_072414_general_final.pdf

[vi] For more information, see: http://www.stormrecovery.ny.gov/funding-portal

[vii] For more information, see: http://www.stormrecovery.ny.gov/funding-portal

[viii] Eric S. Blake, Todd B. Kimberlain, Robert J. Berg, John P. Cangialosi, John L. Beven II, National Hurricane Center, *Tropical Cyclone Report, Hurricane Sandy*, February 12, 2013, retrieved January 21, 2014. http://www.nhc.noaa.gov/data/tcr/AL182012_Sandy.pdf

[ix] http://www.nyc.gov/html/sirr/downloads/pdf/final_report/Ch3_Coastal_FINAL_singles.pdf

[x] https://stormrecovery.ny.gov/sites/default/files/uploads/coastal_and_social_resiliency_initiatives_-_tottenville_draft_scope.pdf

[xi] https://stormrecovery.ny.gov/sites/default/files/uploads/Coastal%20and%20Social%20Resiliency%20Initiatives%20-%20Tottenville%20FINAL%20SCOPE%20and%20RTC_1.pdf

[xii] https://www.newyorkharborschool.org/crew/new-york-harbor-foundation/

[xiii] GOSR is currently evaluating different potential environmental review frameworks that could potentially reduce the timeframe for environmental review for some or all project components, while other may require lengthier studies. GOSR will ensure that its environmental review framework is informed by consultation with governmental stakeholders and the public.

[xiv] https://stormrecovery.ny.gov/sites/default/files/crp/community/documents/MOU-Tottenville%20Dune.pdf

[xv] https://stormrecovery.ny.gov/sites/default/files/uploads/coastal_and_social_resiliency_initiatives_-_tottenville_draft_scope.pdf

[xvi] https://stormrecovery.ny.gov/sites/default/files/uploads/Coastal%20and%20Social%20Resiliency%20Initiatives%20-%20Tottenville%20FINAL%20SCOPE%20and%20RTC_1.pdf